CHAPTER 4

CASUALTY RECEIVING AREA

STANDARD OPERATING PROCEDURE

500 BED FLEET HOSPITAL

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500 BED FLEET HOSPITAL

STANDARD OPERATING PROCEDURES

CASUALTY RECEIVING PROCEDURE

A. **MISSION:** Equipped to perform triage and to provide emergency care and treatment to patients until more definitive care is available. Secondarily, to ensure patient flow is orderly and patient disposition is correct.

B. **FUNCTIONS**:

1. Triage.

2. Give emergency care.

(a) Airway - With C-spine precautions.

(b) Breathing.

(c) Circulation.

(d) Resuscitation of vital functions.

(e) Secondary assessment.

(f) Initiation of definitive care.

3. Control patient flow.

(a) Initiate admission process.

(b) Monitor patient admissions to hospital departments.

C. **PHYSICAL DESCRIPTION**:

1. Location within complex:

2. Sheltering.

Type: Temper Tent.

Quantity:

3. Material.

IOL: 0001, CROA, CROC, CROD, CROE

D. **SPECIAL CONSIDERATIONS:**

1. Space is limited. Patients will only be held long enough to resuscitate and stabilize before transfer to another hospital area.

(a) Sixteen (16) litter stations inside Casualty Receiving during steady state.

(b) Four (4) litters placed in vestibule for peak state.

(c) Six (6) folding chairs for ambulatory patients in back of

temper tent.

2. Triage occurs outside the casualty receiving area at litter side.

3. If possible, x-ray, lab work, etc. will be completed prior to admission to the ward. X-rays and lab must be done STAT on unstable immediate category patients. Others will be worked in as x-ray, lab become available.

4. Casualty receiving personnel will initiate the treatment records and transport the patients to other hospital areas.

5. Anesthesia will be on-call to the area to assist in intubation and ventilation of patients.

E. **WORKLOAD**:

1. Steady state - 80 admissions/day.

Major surgical admissions - 20 - 54 Admissions
Minor surgical admissions - 34
Medical admissions - 26 Admissions
Total - 80 Admissions

2. Peak state - 120 admissions/day.

Major surgical admissions - 30 - 80 Admissions
Minor surgical admissions - 50
Medical admissions - 40 Admissions
Total - 120 Admissions

3. Projected length of stay: Average - 30 minutes

F. **ORGANIZATION**:

1. Responsibility. Head of Casualty Receiving, who reports to the Head, Surgical Department, is assigned overall management responsibility. The Charge Nurse is responsible for day-to-day operations of the area. Casualty receiving area has three functional components; triage, emergency treatment, and hospital admitting.

2. Organization chart.

Head, Surgical Department

Head, Casualty Receiving

Triage Officer Anesthesia Watch

Triage Recorder Admissions Clerk

Charge Nurse

Primary Treatment Teams | On Call Treatment Teams

Senior Corpsman

3. Staffing.

(a) Criteria.

(1) Ratios.

a One Triage Officer per watch with backup.

b One Triage Recorder per watch with backup.

c One Admissions Clerk per watch during steady state; to be supplemented during peak state.

d One treatment team per 2 patients. Team only treats one patient at a time. Each team will consist of:

1 Medical Corps Officer.
1 Nurse Corps Officer.
2 HMs.
1 Physician Assistant (optional).

Backup treatment teams during peak state will be taken from Acute Care Wards.

e Eight additional general duty hospital corpsmen per watch to serve as runners, litter bearers.

f One on-call anesthesia watch with backup.

(2) Special qualifications.

a It is essential that all medical/nursing personnel have some emergency room, trauma, or critical care experience.

b All Medical, Dental, and Nurse Corps Officers assigned to Casualty Receiving must complete Advanced Trauma Life Support (ATLS) and Advanced Cardiac Life Support (ACLS) courses.

c All Physician Assistants must complete Advanced Cardiac Life Support (ACLS) course.

d All HMs must complete Basic Cardiac Life Support (BCLS) course and have EMT-Ambulance level certification.

e The Head of the Casualty Receiving Area will be an Emergency Medicine Physician.

f The Triage Officer will be permanently assigned for the AM watch and may be a Medical Corps, Dental Corps, or Nurse Corps Officer. He/she must have previous triage experience.

g Team leader for a treatment team must be a Medical Officer; preferably an Emergency Medicine Physician.

h The Charge Nurse must be an Emergency Room Nurse subspecialty code 1945.

i The Senior Corpsman must be an Independent Corpsman, NEC 8425.

(b) Staffing pattern: Two 12-hour watches.

Personnel	AM Watch	Night Watch	Total Assigned
Triage Officer	1	1	2
Triage Recorder	1	1	2
Admissions Clerk	1*	1*	2
Medical Corps	4	3**	7
Nurse Corps	6	4	10
Physician Assistants	1***	2	3
EMT HM	6	6	12
HM	11	9	20

During peak state, a second admission clerk will assist in Casualty Receiving.

**General Surgeons will rotate coverage for Treatment Teams 2 and 3 on night watch.

***Two additional physician assistants assigned to the Specialty Treatment Area during the AM watch may be called to assist in Casualty Receiving.

4. Assignments by billet sequence number: See TAB A, page 28.

5. Watch bill: See TAB B, page 30.

6. Special watches: N/A.

G. TASKS:

Task	Method
1. RECEIVE PATIENTS.	Casualty Receiving Area is fully staffed and equipped to receive patients.

1.1 Set up treatment stations (litter spaces) in Casualty Receiving Area IAW TAB C-1 to be continually ready for patients.

1.2 The Command Duty Officer will notify the Head, Casualty Receiving of incoming patients.

1.2.A Specific information will include:

* Estimated time of arrival.
* Number of patients.
* Number of ambulatory versus litter patients.
* Contaminated patients.

1.3 Head, Casualty Receiving will alert Triage Officer and treatment teams to receive patients.

1.4 Hospital Corpsmen will assist in transporting patients.

1.4.A Provide at least one corpsman per field ambulance.

1.4.B Serve as litter bearers in transporting patients from helicopter landing site to Casualty Receiving Area.

1.4.C Observe safety precautions in carrying litters.

1.5 Prior to being transported to Casualty Receiving the following will be done:

1.5.A Security will remove weapons.

1.5.B Environmental Health will decontaminate patients away from hospital IAW Chapter 9.

2. TRIAGE PATIENTS. The Triage Officer will sort and prioritize patients for treatment according to the seriousness of their injury. This is performed at the litter side outside Casualty Receiving area.

2.1 Examine patient to determine extent of injury.

2.1.A Expose injury site. Remove enough clothing to expose injury.

2.1.B Observe patient. Look at overall patient condition for 30-60 seconds. Check ABC's.

2.1.C Do a brief secondary exam to detect injuries.

2.2 Review Field Medical Card, DD 1380, attached to patient.

2.3 Dictate to Triage Recorder summary of injuries to be recorded on the Field Medical Card or on medical record if chart already started.

2.4 Assign triage category.

2.4.A Using the Military Triage Classification System IAW FMFM 4-5 (TAB F-1), the Triage Officer will verbally assign a triage category of minimal (M), delayed (D), immediate (I), or expectant (E) to each patient.

* The categories are:

*Minimal - Injuries are slight and can be managed with buddy care in Specialty Treatment Area.

*Delayed - Medical and/or surgical care is needed but patient can wait for several hours before definitive care is given. Watch patient so condition does not revert to immediate.

*Immediate - Require immediate medical and/or surgical attention to survive life or limb.

*Expectant - Hopelessly wounded or dead on arrival. Casualties who may have appeared salvageable earlier, but deteriorated during transport. Last priority for surgical intervention.

2.4.B Triage Recorder will record information on each patient. Place an initial (M, D, I, or E) for triage category assigned on the field medical card, Triage Log, and medical chart if begun. Place tape on patient's forehead with triage number assigned. Make appropriate entries in Triage Log. (See TAB G-2)

2.5 Designate areas outside Casualty Receiving for holding patients according to treatment priority.

2.5.A Send immediate category patients into Casualty Receiving Area first.

2.5.B Send other categories of patients via Casualty Receiving Area Log-in desk and then to designated hospital area.

2.5.C Keep patients with unexploded ordnance outside Casualty Receiving area and place sandbags around patient IAW TAB C-23.

3. ADMIT PATIENTS. The Admissions Watch will admit each patient to the hospital. During peak times, a back-up admissions clerk will assist. This process will be initiated at the log in desk in Casualty Receiving Area. Specifically, the watch will:

3.1 Enter patient information onto the terminal. The Quick Admit Screen should be used to expedite admissions during emergent situations.

3.1.A Enter patient's name.

3.1.B Register number will automatically be assigned by the system. You may use another number if you so desire.

3.1.C The admission type will say "DIR", which means "Direct Admission". Another type of admission would be a transfer from another hospital.

3.1.D Enter in the most significant diagnosis, the one that will require the greatest amount of care.

3.1.E You may assign a ward to the patient as time permits using the table at the bottom of the screen.

3.1.F You may put in the medical specialty using the ASMRO codes. Use the "?" key to give

you the list of medical specialty abbreviations.

3.1.G Go to the next patient.

3.2 Issue an admission pack that will accompany the patient.

3.3 Prepare an identification wrist band for the patient.

3.4 Secure patient valuable and mark with both the patient's name and register number.

3.5 Enter additional patient information on the terminal if the time permits by using the "ADMIT" screen rather than the "QUICK ADMIT SCREEN".

4. DESIGNATE TREATMENT Head, Casualty AREA Receiving or Charge Nurse will assign patients to designated areas for treatment.

4.1 Assign Immediate category patients to Casualty Receiving Area Treatment Teams.

4.1.A Use three permanent treatment teams standing by in a treatment station.

4.1.B Activate on-call treatment teams to Casualty Receiving as needed to provide coverage for immediate category patients.

*Notify Command Duty Officer of recall requirements.

4.1.C Place the most critical patients in the two treatment stations set up to handle Multiple Trauma Patients requiring major resuscitative measures.

4.2 Instruct litter bearers to transport other categories of patients out of Casualty Receiving to designated Areas.

4.2.A Minimal - Specialty Treatment Area.

4.2.B Delayed medical - Wards.

4.2.C Delayed surgical - OR prep and hold area or wards depending on Surgical backlog.

4.2.D Expectant - Ward designated for expectants.

* Notify Chaplains of expectant patients.
* Call Pathology if patient dies.

4.3 Call Security to summon an explosive ordnance disposal expert to patient with unexploded ordnance embedded.

5. REPORT STATUS. The Head, Casualty Receiving will notify other hospital areas of workload status.

5.1 Notify Registrar in Patient Affairs Department of number of immediate patients awaiting surgery and those delayed patients transferred to wards.

5.2 Notify OR Prep and Hold Ward Medical Officer of surgical priorities. TAB C-2 assigns surgical priorities.

6. INITIATE TREATMENT. Open admission packet and remove the Record inpatient treatment record and other chits for requesting blood, lab, and x-rays.

6.1 Corpsman B on Treatment Team will serve as recorder. He will:

*Remove SF 600 with the pre-printed Admission Note (FHCZ 0104 form and complete information.

*Remove SF 508, Doctor's Order Form for recording orders given by Medical Officer.

*If patient stays beyond 30 minutes, remove SF 539, Abbreviated Clinical Record to begin recording history and physical findings. Also may initiate SF 511 to record vital signs and DD 792 to record intake and output.

7. TREAT PATIENT. Physician led treatment teams will provide emergency medical care within the bench mark times (TAB C-4). Each team member will perform specific duties IAW TAB C-3. Treatment will consist of:

* Primary assessment.
* Resuscitation of vital functions.
* Secondary assessment.
* Initiation of definitive care IAW ATLS protocol, TAB F 3.

7.1 PERFORM PRIMARY ASSESSMENT Done to identify life threatening conditions that require immediate treatment. Assessment takes 30-60 seconds to perform. The areas to assess are:

A - Airway.
B - Breathing.
C - Circulation (Cardiac Bleeding).
D - Disability: Nueroloic Status.
E - Expose body.

7.1.A AIRWAY. Check for air exchange. Be alert for C-spine injury in all injuries to head, spine, neck or when patient is unconscious.

7.1.B BREATHING. Observe: rate, rhythm, and depth of respirations; breath sounds; cyanosis. Assume compromised ventilation with

tension pneumothorax, open pneumothorax, and large flail chest with pulmonary contusion.

7.1.C CIRCULATION Assess cardiac output and observe for bleeding.

7.1.C1 For cardiac output, observe:

Pulse rate, quality, regularity and pulse site used. Capillary refill time. Skin color.

7.1.C2 Report cardiac tamponade if Beck's Triad is present:

Venous pressure elevation. Decline in arterial pressure. Muffled heart tones.

7.1.C3 If exsanguinating hemorrhage is found, do the following:

Immediately apply direct pressure to wound. Elevate the extremity. Tie/clamp off obvious bleeder.May apply MAST (Anti shock Trousers). Use a tourniquet if all else fails. Beware of potential internal bleeding with thoracic/abdominal injuries, i.e., massive hemothorax.

7.1.D DISABILITY Assess neurological status by checking:

Pupil size and reaction.
Level of consciousness using the AVPU Scoring Method.

A - Alert.
V - Responds to vocal stimuli.
P - Responds to painful stimuli.
U - Unresponsive.
Rectum for sphincter control.

7.1.E EXPOSURE Remove all remaining clothing for a complete assessment.

7.2 INITIATE RESUSCITATIVE MEASURES Initiate shock management and other emergency measures needed to manage life-threatening conditions identified in the primary assessment. The priority areas of management are:

Airway.
Breathing.
Circulation.
Physiological Status.

Begin CPR whenever respiratory/cardiac failure is assessed. Follow hospital code procedures in TAB C-5. Record information on Cardiac Arrest Flow Sheet. Perform CPR IAW ACLS/BCLS criteria, TAB F-4.
Defibrillate patient IAW TAB C-6.

7.2.A MAINTAIN PATENT AIRWAY: To establish and maintain an airway Maintain C-spine precautions. Use chin lift or jaw thrust to open airway. Clear airway foreign bodies. Insert oropharyngeal airway or nasal trumpet.

Assess for need to intubate or insert a surgical airway IAW TAB C, Encl A. Endotracheal or nasotracheal intubation or cricothyroidotomy will be performed by a physician IAW ATLS protocol, TAB F-3. If C-spine fracture is suspected, immobilize the patient with a Philadelphia collar.

7.2.B CONTROL BREATHING To maintain adequate ventilatory exchange: Administer oxygen via mask/nasal cannula at 2 iters/minute to trauma patients. Seal open pneumothorax with sterile petroleum dressing taped securely on 3 sides. Alleviate tension pneumothorax by doing a thoracentesis, TAB C-7.

7.2.C CONTROL CIRCULATION To restore adequate circulation:

7.2.C1 Initiate two large-caliber IVs (#16 gauge or larger needles) in peripheral veins to access the circulatory system. Perform IV cut-down if necessary.

7.2.C2 Draw blood for baseline lab tests and type and cross match when initiating IVs. The tests are:

CBC (7 ml blood in lavender top tube).
Chemistries (Na,K,CO_2,BUN,Glucose)-(7ml blood in red top tube).
Type and cross match for 4 units (7ml blood in red top tube).
Recorder will label blood tubes, complete forms, and send a runner to lab with STAT blood work.

7.2.C3 Administer IV fluids. Infuse 1 liter of Ringers Lactate (LR) solution at rate determined by Medical Officer. Continue infusing LR or NaCL solution using a 3:1 ratio of fluids to blood replacement. Determine flow rate by monitoring pulse, BP, urine output and mental state.

7.2.C4 Replace blood with whole blood or packed red cells as first choice. The choice of blood replacement will be governed by the amount of time permitted to wait for cross-type results. Use type specific

blood as a second choice and low-titer type O blood as a third choice.

7.2.C5 Do ECG monitoring on trauma patients. There are only 5 cardiac monitors in Casualty Receiving.

7.2.C6 Apply MAST (anti-shock trousers) IAW TAB C-8 as needed to treat shock and maintain systolic pressure.

7.2.D CONTROL BLEEDING Continue applying direct pressure to wound.

7.2.E MONITOR PHYSIOLOGICAL Obtain frequent quantitative STATUS measurements of the following parameters.

7.2.E1 Monitor vital signs q 15 minutes.

7.2.E2 Do BP readings q 15 minutes.

7.2.E3 Measure pulse pressure width and report if narrowed.

7.2.E4 If possible, draw arterial blood gases (ABG) on any patient on a ventilator.

Obtain 1.5ml arterial blood in heparinized plastic syringe. Place syringe on ice and send runner to lab STAT.

7.2.E5 Insert urinary catheter upon order. Report initial urine output and obtain a urinalysis sample. Monitor urinary output and report oliguria; urine output less than 30 ml/hour.

7.2.E6 Insert nasogastric tube and connect to low intermittent suction. In case of head or maxillofacial trauma do not insert until after Halo test is performed to identify presence of CSF. If Halo test is positive, insert tube through mouth.

7.3 PERFORM SECONDARY ASSESSMENT Perform a head to toe comprehensive assessment. Assess the following:

Head and skull.
Maxillofacial injuries.
Neck/C-Spine.
Chest.
Abdomen.
Perineum/rectum.
Extremities upper and fractures.
Complete examination including spine, rectum.
Burns.
Roll patient on side to exit and entrance wounds. See TAB C-9 for a description of secondary IAW ATLS protocol, TAB F-3.

7.4 SCORE TRAUMA. Assign a trauma score to patient using the trauma score index. Recorder will place numerical value on a pre-printed SF 600.

7.5 TAKE HISTORY. Take an "AMPLE" history from patient gathering information about:

A - Allergies.
M - Medications currently being taken by the patient.
P - Past illnesses.
L - Last meal.
E - Events preceding the injury.

Recorder will place information on pre-printed SF 600.

7.6 INITIATE DEFINITIVE CARE Begin treatment measures that will further stabilize the patient, if patient remains more than 30 minutes. These measures will enhance the emergency resuscitative treatments already being done.

7.6.A IMPROVE VENTILATION Perform procedures to allow for full expansion of lungs.

7.6.A1 Insert a chest tube IAW TAB C-10.

7.6.A2 Maintain under water seal suction at 20-30cm water pressure, using high volume thoracic suction IAW TAB C-10.

7.6.A3 Draw ABGs after tube is in place.

7.6.A4 Obtain a chest x-ray.

7.6.A5 Monitor respirations and breath sounds every 30 minutes.

7.6.A6 May perform pericardiocentesis to treat cardiac tamponade.

7.6.B MANAGE ABDOMINAL INJURIES Observe for internal bleeding caused by penetrating or blunt trauma.

7.6.B1 Insert a nasogastric tube, connect to low intermittent suction, and monitor gastric contents.

7.6.B2 Monitor urinary output checking for hematuria.

7.6.B3 Perform peritoneal lavage IAW TAB C-11 to determine the need for surgery.

7.6.C CLEAN WOUNDS. Clean and dress wounds.

7.6.C1 Remove old dressings on wound.

7.6.C2 Debride the wound, removing gross contaminants and devitalized tissue.

7.6.C3 Cover the wound with a sterile dressing.

7.6.C4 Tape securely.

7.6.D SPLINT FRACTURES Splint fractured extremity if not previously done.

7.6.D1 Apply air splint for arm and leg fractures IAW TAB C-12.

7.6.D2 Apply Thomas Ring leg traction splint for femoral fractures IAW TAB C-13.

7.6.D3 Apply MAST (anti-shock trousers) for pelvic fracture IAW TAB C-8.

7.6.D4 Perform circulatory checks to affected extremity every 30 minutes.

7.6.E ADMINISTER TETANUS Administer 0.5 ml TOXOID absorbed Tetanus Toxoid prophylactically for open extremity, ballistic, or penetrating wounds. Can be delayed until admitted to ward.

7.6.F MONITOR NEUROLOGICAL Monitor neurological status to detect early changes. Do initial assessment and when transferred to another hospital area.

7.6.F1 Determine Glasgow Coma score.

7.6.F2 Check pupils for size and response to light.

7.6.F3 Observe C-spine injured patients closely for respiratory distress.

7.6.G OBTAIN X-RAYS Obtain C-spine, chest, and pelvic x-rays on multiple trauma patients. Can be done when transporting stable patient to ward.

7.6.G1 Immobilize any suspected C-spine injured patient on a long board before moving for x-rays.

7.6.G2 Splint fractures before x-rays are taken.

7.6.G3 Transfer patient to x-ray module whenever possible. Portable x-ray unit should be used only on unstable patients who cannot be transferred.

7.6.H TREAT BURNS. Base treatment of burns upon assessment.

7.6.H1 Observe for inhalation injuries and perform endotracheal intubation as needed.

7.6.H2 Administer IV fluids to maintain urine output between 30-50 ml/minute.

7.6.H3 Administer pain medications via IV. Do not use medication to control anxiety due to hypoxia and hypovo-velimia.

7.6.H4 In a circumferentially burned limb, perform anescharotomy to relieve edema pressure.

7.6.H5 Treat chemical burns IAW TAB C-14.

7.6.I TREAT POISONING AND OVERDOSES Administer antidotes for Poisoning and overdoses from the antidotal storage locker provided by Pharmacy Department (TAB F-7).

7.6.J TREAT VENOMOUS BITES SNAKES SPIDERS, AND OTHER INSECTS

Give treatment for venomous snake bites IAW TAB C-15 and Encl. F.

7.6.K TREAT HEAT INJURIES Give treatment for heat injuries according to severity of illness.
Treat for heat cramps IAW TAB C16.
Treat for heat exhaustion IAW TAB C-17.
Treat for heat stroke IAW TAB C-18.

7.6.L TREAT COLD INJURIES Give care according to whether cold injury is to entire body, hypothermia (see TAB C- 19) or to an extremity (see TAB C-20)

7.7 TREAT PATIENT WITH UNEXPLODED ORDNANCE Handle patient IAW TAB C-23.

8. RECORD TREATMENTS Treatment records will be completed on each patient prior to transfer.

8.1 Recorder will record admission assessment, treatments, and medications on FHCZ 0104 form.

8.2 Medical Officer will verify and co-sign all entries on doctor's orders, SF 508 and complete diagnostic sections on admission note.

9. TRANSFER PATIENTS. Transfer first priority surgical patients to OR Prep and Hold area as available.

9.1 The nurse on each treatment team will give report to the Charge Nurse of the receiving area via field telephone.

Include in report:
patient identification,
primary assessment,
resuscitative measures given,
secondary assessment,
lab and x- rays done,
therapeutic plan of care.

9.2 The general duty corpsmen will transport the patient to assigned areas. Wheeled litter will be used when possible. A medical officer, nurse, or physician assistant must accompany critical patients to ICU Ward.

10. CSR SUPPLIES Contaminated items from other hospital areas. The

using department will take items from other hospital areas to the CSR Support Module. The Collection /Reissue HM in the CSR Support Module will receive all items. The Collection/Reissue Hm in the CSR Support Module will pull Custody Card/Inventory Lists for instrument trays loaned from CSR to other hospital areas. Jointly inventory the tray with person returning the tray/equipment.

Note any missing items.

Record and set aside any damaged item IAW the SOP for repair procedures. Both persons will sign the Custody Card/Inventory List.

11. TRAIN PERSONNEL TO OPERATE SPECIAL EQUIPMENT — All Casualty Receiving Area personnel will be able to Locate and operate the following equipment:

- ECG machine.
- Cardiac monitor.
- Suction.
- Oxygen administration equipment.
- Cardio Resuscitation Kit (SPARK).

12. PERFORM LEADERSHIP TASKS — Provide training and supervision to advance emergency medical skills and knowledge.

12.1 PROVIDE CONTINUING EDUCATION — Provide orientation.

12.1.A Cross train HM treatment team members.

12.1.B Provide senior personnel with experience in administration, clinical teaching, and supervision.

12.1.C Conduct classes on new procedures/protocols as required.

12.2 PROVIDE SUPERVISION /COUNSELING — Charge Nurse will supervise nurses and corpsmen and Head, Surgical Department will supervise all medical officers.

12.2.A Provide performance counseling.

12.2.B Arrange with chaplains and Head, Neuropsychiatry Department for group sessions to discuss strategies for coping with stress in combat situations.

12.3 COMPLETE REPORTS — Charge Nurse will monitor that all logs and reports are completed.

12.3.A Incidents will be reported on Incident Report Data Sheet, NAVMED 6010/14, reviewed by Charge Nurse, Head, Casualty Receiving Area, and sent to Head, Surgical Department. Charge Nurse will monitor reports, counsel as needed, and provide classes related to an incident.

12.3.B Complete reports for Casualty Receiving Area. Triage Log. Census Report at 2400.

12.3.C Return all outdated drugs to Pharmacy for disposal.

H. **STANDARD OPERATING PROCEDURES:** See TAB C, page 32.

I. **CLINICAL POLICIES/GUIDELINES:** See TAB D, page 115.

J. **STANDARDS AND JOB DESCRIPTIONS:** See TAB E, page 121.

K. **DOCUMENTATION:**

1. References: See TAB F, page 142.

2. Forms: See TAB G, page 143.

TAB A

ASSIGNMENTS BY BILLET SEQUENCE NUMBER

Department: CASUALTY RECEIVING

Billet Number	Title	Team	Designator Spec. Code	Rank/ Rate	Watch Section
1. Nurse Corps.					
42089	Emer. Med. Nurse		2900/0963	0-5	1*
31003	Charge Nurse	T1	2900/0940	0-4	2
31005	Staff Nurse	T1	2900/0944	0-3	1
31007	Staff Nurse	T2	2900/0944	0-3	1
31008	Staff Nurse	T3	2900/0944	0-3	1
31009	Staff Nurse	T2	2900/0944	0-3	2
31011	Staff Nurse	T3	2900/0944	0-3	2
31113	Staff Nurse	T1	2900/0944	0-3	1
31117	Staff Nurse	T2	2900/0944	0-3	2
31225	Staff Nurse	T1	2900/0944	0-2	1
2. Dental Corps.					
65029	Dental Officer	TO	2200/0020	0-6	1*
3. Medical Corps.**					
42029	Emergency Medicine, In Charge, Head of Casualty Receiving	T1	2100/0102	0-5	1*
42049	Emer Physician	T2	2100/0102	0-4	1
42051	Emer Physician	T3	2100/0102	0-4	1
42069	Emer Physician	T0	2100/0102	0-3	2
42071	Emer Physician	T1	2100/0102	0-3	2
42073	Emer Physician	T2	2100/0102	0-3	1
4. Warrant Officers (Optional).					
42109	Sr. Physician Asst. CR/	T3	7540	W-4	1*
42129	Physician Asst.	ST +	7540	W-3	1
42149	Physician Asst.	ST +	7540	W-2	2
5. Hospital Corpsman.					
42019	EMT Senior Corpsman		8425	E-6	1
42039	Gen Duty HM	T1	0000/HM	E-5	1
42041	Gen Duty HM	T2	0000/HM	E-5	1
42043	Gen Duty HM	T3	0000/HM	E-5	1
42045	Gen Duty HM	GD	0000/HM	E-5	1
42047	Gen Duty HM	GD	0000/HM	E-5	1
42059	Gen Duty HM	T2	0000/HM	E-3	1
42061	Gen Duty HM	T3	0000/HM	E-3	1
42063	Gen Duty HM	GD	0000/HM	E-3	1
42065	Gen Duty HM	GD	0000/HM	E-3	1
42067	Gen Duty HM	T1	0000/HM	E-3	1
42069	Gen Duty HM	T2	0000/HM	E-3	1
42071	Gen Duty HM	T3	0000/HM	E-3	2
42073	Gen Duty HM	GD	0000/HM	E-3	2
42075	Gen Duty HM	GD	0000/HM	E-3	2
42077	Gen Duty HM	GD	0000/HM	E-3	2

51039 Gen Duty HM	T1	0000/HM	E-4	1
51041 Gen Duty HM	T2	0000/HM	E-4	1
51043 Gen Duty HM	T3	0000/HM	E-4	1
51045 Gen Duty HM	GD	0000/HM	E-4	1
51061 Gen Duty HM	GD	0000/HM	E-3	1
51063 Gen Duty HM	T1	0000/HM	E-3	2
51065 Gen Duty HM	T2	0000/HM	E-3	2
51069 Gen Duty HM	GD	0000/HM	E-3	2
51071 Gen Duty HM	GD	0000/HM	E-3	2
51073 Gen Duty HM	GD	0000/HM	E-3	2
51075 Gen Duty HM	GD	0000/HM	E-3	2
51077 Gen Duty HM	GD	0000/HM	E-3	2
36039 Gen Duty HM	GD	0000/HM	E-5	1
36041 Gen Duty HM	GD	0000/HM	E-5	1
36059 Gen Duty HM	TR	0000/HM	E-3	1
16043 Patient Affairs HM	--	0000/HM	E-4	1
16045 Patient Affairs HM	--	0000/HM	E-4	2

Key:
CR = Casualty Receiving Area
ST = Specialty Treatment Area
T1 = Treatment Team 1
T2 = Treatment Team 2
T3 = Treatment Team 3
TO = Triage Officer
TR = Triage Recorder
GD = General Duty

Permanent watch stander.

** General surgeons will be assigned on a rotating basis to head treatment teams.

During steady state AM watch, Physician Assistants will be assigned to the Specialty Care Area. During peak states, they will assist treatment teams in Casualty Receiving. On the night watch, Physician Assistants will be assigned to treatment teams 2 and 3.

TAB B

WATCH BILL

AREA DATE

Title Billet#	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	
Triage																						
TO 65029	AT	AT	AT	AT	E	AT	AT	AT	AT	AT	AT	AT	E	AT	AT	AT	AT	AT	AT	AT	E	
HM 36059	AT	AT	AT	E	AT	AT	AT	AT	AT	AT	AT	E	AT	AT	AT	AT	AT	AT	AT	E	AT	
HM 42045	AT	AT	AT	AT	AT	AT	AT	E	AT	AT	AT	AT	AT	AT	AT	E	NT	NT	NT	NT	NT	
TO 42069	NT	NT	NT	NT	NT	E	NT	NT	NT	NT	NT	NT	NT	E	NT	N1	N1	N1	N1	N1	N1	
HM 42059	NT	NT	NT	E	NT	NT	NT	NT	NT	NT	E	NT	NT	NT	NT	NT	NT	NT	E	NT		
HM 42065	NT	NT	NT	NT	NT	NT	NT	E	NT	NT	NT	NT	NT	NT	NT	E	AT	AT	AT	AT	AT	
Patient Affairs																						
*HM 16043	AP	AP	AP	AP	AP	AP	*E	AP	AP	AP	AP	AP	AP	AP	*E	NP	NP	NP	NP	NP	NP	
*HM 16045	NP	NP	NP	NP	NP	*E	NP	NP	NP	NP	NP	NP	MP	*E	AP	AP	AP	AP	AP	AP	AP	
General Duty																						
Ch																						
Nrs 42089	AG	AG	AG	AG	AG	AG	AG	E	AG	AG	AG	AG	AG	AG	AG	E	N1	N1	N1	N1	N1	
HM 31113	AG	AG	AG	AG	AG	AG	E	AG	AG	AG	AG	AG	AG	E	NG	NG	NG	NG	NG	NG	NG	
HM 31117	AG	A3	AG	E	AG	AG	AG	AG	A3	AG	E	AG	AG	AG	AG	A3	AG	E	A3	AG	AG	
HM 31225	AG	E	AG	AG	A3	AG	AG	AT	AG	E	AG	A3	AG	AG	AG	AT	E	AG	AG	AG	AG	
HM 42019	AG	AG	AG	AG	AG	AG	E	AG	AG	AG	AG	AG	AG	E	NG	NG	NG	NG	NG	NG	NG	
HM 42047	AG	A3	AG	E	AG	AG	AG	AG	A3	AG	E	AG	AG	AG	AG	A3	AG	E	A3	AG	AG	
HM 42061	AG	AG	E	AG	AG	AG	AG	AG	E	AG	AG	AG	AG	AG	E	AG	AT	AT	AT	AT	AT	
HM 42063	AG	AG	A1	A2	E	AG	AG	AG	AG	AG	A1	AG	E	AG	AG	AG	AG	A1	E	A2	AG	
HM 51045	AG	E	AG	AG	A3	AG	AG	AT	AG	E	AG	A3	AG	AG	AG	AT	E	AG	AG	AG	AG	
HM 51061	AG	AG	A2	AG	A1	AG	E	AG	AG	AG	A2	A2	A1	E	AG	AG	AG	AG	A2	E	AG	
HM 36039	AG	AG	AG	AT	AG	E	AG	AG	AG	AG	AG	AG	E	AG	AG	AG	AG	AG	E	AT	AG	
HM 36041	AG	AG	E	AG	AG	AG	AG	AG	AG	E	AG	AT	AG	AG	AG	AG	E	AG	AG	AG	AG	ASr
HM 42067	NG	NG	NG	NG	NG	NG	E	NG	NG	NG	NG	NG	NG	NG	E	AG	AG	AG	AG	AG	AG	
HM 42069	NG	N2	NG	NG	NG	E	N3	NG	NG	N2	NG	NG	E	NG	NG	NG	NG	NG	NG	E	NG	
HM 51069	NG	NG	E	NT	NG	NG	NG	NG	NG	E	NG	NG	NG	NG	NG	NG	E	N2	N2	NG	NG	
HM 51071	NG	E	NG	N2	NG	NG	NG	NG	E	NG	NG	N2	NG	NG	NG	E	NG	NG	NG	NG	NG	
HM 51073	NG	NG	NG	E	N3	NG	NG	NG	NG	NG	E	NG	NG	N3	NG	N1	N1	E	NG	NG	NG	
HM 51075	NG	NG	NG	NG	NG	NG	NG	E	NG	NG	NG	N3	NG	NG	E	NG	NG	NG	N3	NG	N3	
HM 42071	NG	N1	N1	NG	NG	NG	E	NT	NG	NG	NG	NG	NG	E	NG	NG	NT	NG	NG	NT	E	
HM 42073	NG	NG	NG	NG	E	NG	NG	NG	N1	N1	NG	E	NG	NG	NG	NG	NG	NG	E	NG	NG	
Team 1																						
MO 42029	A1	A1	A1	A1	AT	A1	E	A1	A1	A1	A1	A1	AT	E	A1	A1	A1	A1	A1	A1	A1	
Nrs 31005	A1	A1	A1	E	A1	A1	A1	AG	A1	A1	A1	E	A1	A1	A1	A1	A1	A1	E	A1	A1	
HM 42039	A1	A1	E	A1	A1	A1	A1	A1	A1	A1	E	A1	A1	A1	A1	A1	E	A1	A1	A1	A1	
HM 51039	A1	A1	A1	A1	E	A1	A1	A1	A1	A1	A1	A1	E	A1	A1	A1	A1	A1	A1	A1	E	
MO 42071	N1	N1	N1	N1	N1	NT	N1	E	N1	N1	N1	N1	N1	NT	NT	E	NT	NT	NT	NT	NT	ACh
Nr 31003	N1	N1	N1	N1	N1	N1	E	N1	N1	N1	N1	N1	N1	N1	E	AG	AG	AG	AG	AG	AG	
HM 51063	N1	N1	E	N1	N1	N1	N1	N1	N1	E	N1	N1	N1	N1	N1	N1	E	N1	N1	N1	N1	

Team 2

MO	42049	A2	A2	A2	A2	A1	E	A1	A2	A2	A2	A2	E	A1	A1	A2	A2	A2	A2	A2	E	A2
Nrs	31007	A2	E	A2	A1	A2	A2	A2	A1	A2	E	A2	A1	A2	A2	A2	A2	E	A2	A1	A2	A2
HM	51041	A2	A2	A2	E	A2	A2	A2	A2	A2	A2	A2	E	A2	A2	A2	A2	A2	A2	A2	E	A2
HM	42041	A2	A2	E	A2	A2	A2	A2	A2	A2	A2	E	A2	A2	A2	A2	A2	A2	A2	E	A2	A2
+Sur	OnCall	N2	N2	N2	N2	N2	N1	N2	N2	N2	N2	N2	N2	N2	N1	N2	N2	N2	N2	N2	N2	N2
Nrs	31009	N2	N2	E	N2	N2	N2	N1	N2	E	N2	N2	N2	N2	N2	N1	E	N2	N2	N2	N2	N2
HM	42075	N2	E	N2	N2	N2	N2	N2	N2	N2	E	N2	N2	N2	N2	N2	N2	E	N2	N2	N2	
HM	51065	N2	N2	N2	E	N2	N2	N2	N2	N2	N2	N2	E	N2	N2	N2	N2	N2	N2	E	N2	N2
PA	51077	N2	N2	N2	N2	N2	E	N2	N2	N2	N2	N2	N2	E	N2	N2	N2	N2	N2	N2	E	N2

Team 3

MO	42051	A3	A3	A3	A3	A2	A2	A2	E	A3	A3	A3	A2	A2	A2	E	A3	A3	A3	A3	A2	A3
Nrs	31008	A3	A2	A3	A2	A3	E	A3	A2	A3	A2	A3	A2	E	A3	A3	A3	A2	A3	A2	A3	E
HM	51043	A3	E	A3	A3	A3	A3	A3	A3	E	A3	A3	A3	A3	A3	A3	E	A3	A3	A3	A3	A3
HM	42043	A3	A3	A3	A3	E	A3	A3	A3	A3	A3	A3	A3	E	A3	A3	A3	A3	A3	A3	E	A3	A3
SrPA	42109	A3	A3	E	A3	A3	A3	A3	A3	A3	A3	A3	E	A3	A3	A3	A3	A3	A3	E	A3	A3	A3
+Sur	On Call	N3	N3	N3	N3	AN	AN	AN	AN	N3	N3	N3	AN	AN	AN	N3	N3	N3	N3	N3	AN	N3
Nrs	31011	N3	N3	N3	E	N3	N3	N2	N3	N3	N3	E	N3	N3	N3	N2	N2	N3	E	N3	N3	N3
HM	42077	N3	N3	N3	N3	N3	N3	E	N3	N3	N3	N3	N3	N3	E	N3	N3	N3	N3	N3	N3	E
HM	51067	N3	N3	N3	N3	E	N3	N3	N3	N3	N3	N3	E	N3	N3	N3	N3	N3	N3	E	N3	N3

Specialty Treatment

**PA	42129	AS	A3	A3	A3	AS	A3	E	A3	AS	A3	A3	AS	A3	E	AS	AS	A3	A3	AS	E	A3
**PA	42149	NS	NS	N3	N3	E	NS	N3	NS	NS	N3	N3	E	NS	NS	N3	N3	N3	N3	E	NS	NS

Key:
First digit = watch
A = AM
N = Night

Second Digit = Assignment
T = Triage
G = General Duty
_ _ Substitute Assignment.
P = Patient Affairs
S = Specialty Treatment Area
1 = Treatment Team One
2 = Treatment Team Two
3 = Treatment Team Three

Patient Affairs department will provide relief.
Surgeons will rotate coverage to treatment teams.
** PA in Specialty Treatment area will substitute for PAs on team 3.

TAB C

STANDARD OPERATING PROCEDURES INDEX

TAB C-1

EQUIPMENT SET UP FOR CASUALTY RECEIVING AREA

A. **PURPOSE:** To maintain equipment and supplies for emergency treatment in a ready state.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Triage area.

(a) U.S. Field Medical Tags, DD 1380.

(b) Tape.

(c) Marking pens.

(d) Scissors.

(e) Terminal and Key board.

2. Casualty Receiving core area items.

NAME	QUANTITY
(a) ECG machine.	2
(b) Cardiac monitor/life pack unit.	5
(c) Respirator.	5
(d) Defibrillator, fresh batteries.	2
(e) Cardio Resuscitation Kit (SPARK).	2
(f) Ambu bag.	2
(g) Laryngoscope.	4
(h) Endotracheal anesthesia set.	2
(i) MAST (Anti-shock Trousers).	3
(j) Oxygen cylinder x - for use by 12 patients.	6
(k) Cutdown tray. (Support CSR Module to prepare)	6

NOTE: These items are portable and will be moved to a treatment station as needed. Generally items are near treatment stations one and two.

3. Treatment stations (20 litter racks).

(a) Two liters of Ringers Lactate (LR) solution with adult drip and extension tubing connected.

(b) IV catheters, (14, 16, 18 gauge).

(c) Peritoneal lavage fluid (LR) with adult drip and extension tubing.

(d) Alcohol swabs.

(e) Tape torn into small strips.

(f) Dressing.

(g) Suction machine with catheter attached (1 machine/2 beds).

(h) Oxygen connected to nasal cannula (12 set up).

(i) Blood pressure cuff.

(j) Thermometers, glass.

(k) Otoscope/ophthalmoscope (1 item/2 beds).

(l) Blood drawing equipment.

- Tourniquet.
- Red top tubes.
- Lavender top tube.
- Vacutainer with needle.
- Heparinized plastic syringe in ice basin.

(m) Two 1ml tuberculin syringes with 1% xylocaine without epinephrine.

(n) Nasogastric tubes.

(o) Irrigating syringe (Toomey).

(p) Scissors.

(q) Flashlight.

(r) Pre-numbered admission packet obtained when patient admitted.

(s) Trash bag.

NOTE: Two treatment stations are stocked with additional items to enable the treatment team to perform complex life saving measures (i.e. monitors, surgical lights, instrument tray stands).

D. **CRITERIA**:

1. Emergency equipment in core area will be checked every watch. Equipment checklist will be initialed (TAB J-1).

2. The treatment stations will be cleaned and set up between each patient

so that each area is fully equipped at all times.

3. Electrical equipment will be turned on when alerted that casualties are arriving (i.e. monitor, surgical lights, suction machines).

E. **STEPS**:

1. Senior Corpsman will:

(a) Check emergency Cardio-Resuscitation Kit and oxygen cylinders daily and make appropriate entry in departmental log, TAB G-1.

(b) Maintain adequate supplies.

(c) Order supplies on a QOD basis.

(d) Assist setting up treatment stations.

2. Treatment Team Corpsmen will set up treatment station after use to maintain ongoing readiness state.

3. Admissions Clerk will:

(a) Prepare admission packets.

(b) Run daily reports for Commanding Officer.

F. **RESPONSIBILITY**:

1. Senior Corpsman.

2. Treatment Team HMS.

3. Admissions Clerk.

TAB C-2

PRIORITIES OF SURGICAL TREATMENT

A. **PURPOSE:** To limit operating room capability to the most urgent cases.

B. **DEFINITION:** Categorizing of all surgical patients according to the extent of their injuries such that the most urgent, unstable patient will be operated on first.

C. **PRIORITIES OF SURGICAL TREATMENT**:

1. First priority: Patients threatening to die from asphyxia or hemorrhage.

(a) Asphyxia: Airway obstruction from mechanical causes, sucking chestwound, tension pneumothorax, or maxillofacial wounds with airway obstruction.

(b) Shock: Major external hemorrhage, major internal hemorrhage, visceral injuries, evisceration, cardio/pericardial injuries, massive muscle damage, major fractures, multiple wounds and severe burns over 20%.

2. Second priority: Surgery performed after resuscitative measures are completed and adequate pre-op preparation.

(a) Visceral wounds: GI tract perforations, biliary and pancreatic wounds, GU tract wounds, thoracic wounds without asphyxia.

(b) Vascular injuries: All injuries in which use of a tourniquet is necessary.

(c) Closed head wounds: Head wounds with increasing loss of consciousness during observation.

(d) Burns: Burns under 20% that involve face, hands, feet, genitalia, or perineum.

3. Third priority: Surgery performed after pre-op preparation on wounds which cause morbidity if left untreated for prolonged periods.

(a) Brain and spinal cord injuries, decompression required.

(b) Soft tissue wounds, debridement necessary but muscle damage is less extensive.

(c) Lesser fractures and dislocations.

(d) Eye injuries.

(e) Maxillofacial injuries without asphyxia.

(f) Burns less than 20%.

4. Time lapses between admission and operation.

(a) Varies directly with the surgical priority of injuries and the

total number of patients requiring surgery.

(b) Ideal circumstances.

(1) First priority - 1-2 hours.

(2) Second priority - 2-8 hours.

(3) Third priority - 8-12 hours.

D. **RESPONSIBILITY**:

OR Prep and Hold Surgical Prioritizing Officer.

E. **REFERENCE**:

NATO Emergency War Surgery Handbook.

TAB C-3

TREATMENT TEAM PROTOCOL

A. **PURPOSE:** To assemble a group of four health care providers to deliver predetermined, planned resuscitative care to a trauma patient.

B. **DEFINITION:** Each member of the treatment team has an assigned role according to limitations, abilities, and training.

C. **CRITERIA:**

1. Each member knows team position, role and performs duties independently.

2. Team members follow the ATLS protocol for treating patients. Team members take orders only from Team Leader.

D. **ROLES OF TREATMENT TEAM MEMBERS**:

1. Team Leader - Medical Officer (Stands at head or top right of patient).

(a) Performs primary assessment.

(b) Directs resuscitation efforts.

(c) Concentrates on supra-diaphragmatic area of the body.

(1) Intubates if no anesthesia support.

(2) Performs cricothyroidotomy as needed.

(3) Performs needle thoracentesis and inserts chest tube on right side as necessary

(d) Inserts right peripheral IV and performs IV cutdown if unable to insert.

(e) Applies MAST with orders for care if needed.

(f) Checks pelvis and rectum.

(g) Does secondary assessment.

(h) Formulates treatment plan.

(i) Performs abdominal lavage.

(j) Assists with the application of traction splint.

(k) Dictates Doctor's orders.

2. Nurse Corps Officer (Stands at top left of patient).

(a) Intubates in absence of anesthesia staff at direction of Team Leader (prior special training required).

(b) Performs needle thoracentesis and inserts chest tube on left side as necessary (prior special training required).

(c) Inserts IV in left peripheral vein. Tries upper limb first then lower limb using most distal site on extremity. *

(d) Draws blood for tests from IV as inserted.

(e) Infuses plasma/blood products and IV fluids on left side as ordered by Team Leader. *

(f) Draws radial ABG if done and certified.

(g) Inserts nasogastric tube and connects to low intermittent suction.

(h) Administers IV bolus medications.

(i) Assists Team Leader with other procedures.

3. Corpsman A (Stands to right of patient).

(a) Concurrently removes clothing while Team Leader performs primary assessment.

(b) Attaches ECG monitor.

(c) Places BP cuff on right arm.*

(d) Takes initial vital signs, monitors vital signs and reports trends. Calls out readings every 5 minutes for recording.

(e) Infuses IV solutions on right side as ordered by Team Leader.

(f) Assists with MAST application.

(g) Applies wound dressings and controls for hemorrhage.

(h) Checks neurological status.

(i) Inserts urinary catheter and obtains urinalysis sample.

(j) Applies splint for traction.

(k) Administers medications in right peripheral IV (non bolus drugs) as ordered by Team Leaders. *

4. Corpsman B (Stands at left bottom of patient).

(a) Removes clothing concurrently while Team Leader perform primary assessment.

(b) Recorder for Team Leader.

(c) Acts as equipment feeder to rest of team.

(d) Assists with application of splints, MAST.

5. Anesthesia Staff - or Oral Surgeon when available (Stands at head of patient).

(a) Cleans airway.

(b) Intubates/ventilates.

(c) Stabilizes neck in C-spine injuries.

(d) Assesses chest.

(e) Inserts nasogastric tube especially if maxillofacial injury.

6. Physician Assistant - (Assists when available).

(a) Assists Team Leader as directed.

(b) Inserts additional lines as directed by Team Leader.

(c) Monitors patient status.

(d) Accompanies unstable patients to other areas of the hospital.

NOTE: If extremity is injured/missing, use modified protocol to available limb.

TAB C-4

BENCH MARK TIMES FOR INITIAL ASSESSMENT AND IMMEDIATE RESUSCITATION OF IMMEDIATE CATEGORY PATIENTS

1	Minute	Primary assessment.
4	Minutes	All life saving procedures completed.
5	Minutes	Blood drawn when IV started.
6	Minutes	Secondary assessment completed.
10	Minutes	X-rays completed (C-spine, chest, pelvis).
10	Minutes	Plan formulated for continuous care.
30	Minutes	Transferred from Casualty Receiving Area.

TAB C-5

CARDIAC ARREST PROCEDURE

A. PURPOSE: In the event of sudden cessation of breath, heartbeat, or both, every effort shall be made to re-establish respiratory and/or circulatory function as soon as possible. Cardiopulmonary resuscitation shall be initiated in each incident, unless counter-maned by a Medical Officer or by written order in the patient's record.

B. PROCEDURE:

1. After assessment of cardiac or respiratory arrest is made, immediately initiate basic life support.

(a) Verify unresponsiveness.

(b) Call for help.

(c) If unresponsive, open the airway.

(d) Check for breathing.

(e) If not breathing, give 2 full ventilations, one (1) to one and one half (1 ½) seconds each.

(f) Check carotid pulse.

(g) If pulse is absent, start chest compressions, 80 - 100 per minute.

2. Have second or third person bring emergency equipment to the scene:

(a) Emergency Cardio Resuscitation Kit.

(b) Oxygen cylinder.

(c) Suction machine with all catheters attached.

3. Members of arrest team will:

(a) Perform chest compression (one member).

(b) Manage airway and do ventilations (one member).

(c) Start an IV.

(d) Draw up and administer medications as directed by ACL certified member or Medical Officer. (One member)

(e) Recorder will document arrest on Cardiac Arrest Flow Sheet, TAB J-10. This member will be the same throughout the emergency.

C. VITAL POINTS:

1. Basic life support must not be interrupted for more than 5 seconds.

2. Advanced life support is only effective if proper basic life support

is initiated and maintained.

3. Complete specific nursing notes showing the exact time events were done on Cardiac Arrest Flow Sheet, TAB J-10.

D. EDUCATION REQUIREMENTS:

1. All medical personnel must maintain Basic Cardiac Life Support (BCLS) certification.

2. All medical officers and Critical Care Area Nurses should maintain Advanced Cardiac Life Support (ACLS) certification.

3. CPR drills will be conducted monthly on all nursing wards in order to assure medical personnel awareness of their role in a code.

E. RESPONSIBILITY:

The Medical Officer on Treatment Team.

F. REFERENCE:

Advanced Cardiac Life Support (ACLS) Interim Guideline be the American Heart Association.

TAB C-6

DEFIBRILLATION

A. PURPOSE: To terminate ventricular fibrillation immediately, facilitating the establishment of an effective cardiac rhythm. This is the first and only treatment for ventricular fibrillation.

B. DEFINITION: Also known as precordial shock, it is the conduction of an electrical impulse into the heart to depolarize cardiac muscle and convert fibrillation rhythm into normal sinus rhythm.

C. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. Defibrillator with external paddles.
2. Batteries.
3. ECG monitor with recorder.
4. Conductive medium.
5. Cardio Resuscitation Kit (Sparks Kit).
6. Oxygen therapy equipment.
7. Airways.
8. Endotracheal Anesthesia Set.
9. AMBU bag.
10. Suctioning equipment.

D. CRITERIA:

1. Conversion of an abnormal rhythm following a precordial thump or cough has been well demonstrated in patients with ventricular tachycardia and complete heart block. Recently, it has been demonstrated as well for ventricular fibrillation. Because the speed of defibrillation is critical a solitary precordial thump is recommended for all witnessed cardiac arrests when a defibrillator is unavailable. When a precordial thump is used in patients who have ventricular tachycardia and a pulse, a defibrillator should be available since ventricular fibrillation can be induced. A precordial thump is delivered to the center of the sternum with the hypothenar aspect of the fist and from a height of no more than 12 inches.

2. Defibrillator battery will be charged and ready to use at all times.

3. Person in charge of the arrest will insure all personnel stand clear so that only the patient will receive the electrical current when "ALL CLEAR" is called.

E. STEPS:

1. Initiate basic cardiac life support (BCLS) and summon defibrillation equipment and assistance.

2. Verify ventricular fibrillation by ECG. Correlate with the clinical state of patient.

(a) Establish an airway or use existing endotracheal tube if in place.

(b) Perform external cardiac massage until defibrillator is ready. In the OR, internal cardiac massage may be necessary.

(c) When patients are monitored and defibrillation equipment is available, proceed with defibrillation.

3. Prepare to defibrillate.

(a) Obtain battery operated defibrillator.

(b) Check battery level.

(c) Prepare defibrillator paddles by covering entire metal surface with conductive medium. (The conductive medium is needed to reduce skin resistance to current flow, prevent skin burns, and allow for optimal current flow to the myocardium.)

(d) Dial 200 watts/seconds (Joules).

(e) Activate charge button to charge unit with electrical current.

(f) Validate that defibrillator unit is in the non-synchronized mode so machine will fire correctly.

(g) Place paddles firmly into position against chest wall using 25-30 pounds of pressure.

(1) Best position - transverse position.

a Place one paddle at 2nd intercostal space right of sternum.

b Place second paddle at 5th intercostal space mid-clavicular line, left of sternum.

(2) Alternate position - anterior-posterior position.

a Place one paddle at anterior-precordial area.

b Place 2nd paddle at posterior-intrascapular area.

(h) Recheck ECG rhythm on cardioscope to validate Ventricular fibrillation pattern.

(i) Give command to stand clear of bed/litter/OR table prior to defibrillation to minimize risk of micro or macro shock to staff.

4. Defibrillate the patient.

(a) Depress the discharge button while simultaneously keeping both paddles in place until the electrical current is delivered.

(b) Check ECG rhythm on cardioscope for changes in pattern.

(1) If ventricular fibrillation persists, repeat defibrillation

immediately.

(2) Continue CPR during any delays in defibrillation.

(3) If a second attempt is unsuccessful, immediately defibrillate with up to 360 Joules.

(4) If the ECG monitor shows an organized rhythm, check for a pulse. Continue CPR if no pulse present.

(5) If unsuccessful, continue with current ACLS protocol.

VENTRICULAR FIBRILLATION

This sequence was developed to assist in teaching how to treat a broad range of patients with ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT). Some patients may require care not specified herein. This algorithm should not be construed as prohibiting such flexibility. The flow of the algorithm presumed that VF is continuing. CPR indicates cardiopulmonary resuscitation.

Witnessed Arrest	Unwitnessed Arrest
Check pulse - If no pulse	Check pulse - If no pulse
Precordial Thump	
Check pulse - If no pulse	
CPR until a defibrillator is available	
Check monitor for rhythm - if VF or VT	
Defibrillate, 200 Joules [b]	
Defibrillate, 200-300 Joules [b]	
Defibrillate with up to 360 Joules [b]	
CPR if no pulse	
Establish IV access	
Epinephrine, 1:10,000, 0.5-1.0 mg IV push [c]	
Intubate if possible [d]	
Defibrillate with up to 360 Joules [b]	
Lidocaine, 1 mg/kg IV push	
Defibrillate with up to 360 Joules [b]	
Bretylium, 5mg/kg IV push [e]	
(Consider Bicarbonate)[f]	
Defibrillate with up to 360 Joules [b]	
Bretylium, 10 mg/kg IV push [e]	

Defibrillate with up to 360 Joules [b]

Repeat Lidocaine or Bretylium

Defibrillate with up to 360 Joules [b]

NOTES:
1. Pulseless ventricular tachycardia should be treated identically to ventricular fibrillation.

2. Check pulse and rhythm after each shock. If VF recurs after transiently converting (rather than persists without ever converting), use whatever energy level has previously been successful for defibrillation.

3. Epinephrine infusion should be repeated every five (5) minutes.

4. Intubation is preferable. If it can be accomplished simultaneously with other techniques, then the earlier the better. However, defibrillation and epinephrine are more important initially if the patient can be ventilated without intubation.

5. Some may prefer repeated doses of lidocaine, which may be given in 0.5 mg/kg douses every 8 minutes to a total dose of 3 mg/kg.

6. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of l mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

SUSTAINED VENTRICULAR TACHYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with sustained ventricular tachycardia (VT). Some patients may require care not specified herein. This algorithm should not be construed as prohibiting such flexibility. The flow of the algorithm presumes that VT is continuing. VF indicates ventricular fibrillation; IV, intravenous.

No Pulse	Pulse Present	
Treat as VF	Stable	Unstable
	O_2	O_2
	IV Access	IV Access
	Lidocaine, 1 mg/kg	(Consider sedation)[c]
	Lidocaine, 0.5 mg/kg every 8 min. until VT resolves, or up to 3 mg/kg.	Cardiovert, 50 Joules [d,e]
		Cardiovert, 100 Joules [d]

Procainamide, 20 mg/min until VT resolves, or up to 1,000 mg.	Cardiovert, 200 Joules [d] Cardiovert, with up to 360 Joules [d]
Cardiovert as in unstable patients [c]	If recurrent, add Lidocaine and cardiovert again starting at energy level previously successful; then procainamide or Bretylium.

NOTES:
1. If the patient becomes unstable (see Footnote b for definition) at any time, move to the "Unstable" arm of the algorithm.

2. Unstable = symptoms (e.g. chest pain, dyspnea), hypotension (systolic BP <90 mm Hg), congestive heart failure, ischemia, or infarction.

3. Sedation should be considered for all patients, including those defined in Footnote b as unstable, except those who are hemodynamically unstable (e.g., hypotensive, in pulmonary edema, or unconscious).

4. If hypotension, pulmonary edema, or unconsciousness is present, unsynchronized cardioversion should be done to avoid the delay associated with synchronization.

5. In the absence of hypotension, pulmonary edema, or unconsciousness, a precordial thump may be employed prior to cardioversion.

6. Once VT has resolved, begin an IV infusion of the antiarrhythmic agent that has aided the resolution of the VT. If hypotensive, in pulmonary edema, or unconscious, use lidocaine if cardioversion alone is unsuccessful, followed by bretylium. In all other patients, the recommended order of therapy is lidocaine, procainamide, and the bretyulium.

ASYSTOLE (CARDIAC STANDSTILL)

This sequence was developed to assist in teaching how to treat a broad range of patients with asystole. Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. The flow of the algorithm presumes asystole is continuing. CPR indicates cardiopulmonary resuscitation; VF, ventricular fibrillation; IV, intravenous. If rhythm is unclear and possibly ventricular fibrillation, defibrillate as for VF.

If Asystole is present: [a]

Continue CPR
Establish IV access
Epinephrine, 1:10,000, 0.5-1.0 mg IV push [b]
Intubate when possible [c]
Atropine, 1.0 mg IV push (repeated in 5 min)

(Consider bicarbonate) [d]
Consider pacing

NOTES:
1. Asystole should be confirmed in two leads.

2. Epinephrine should be repeated every 5 minutes.

3. Intubation is preferable; if it can be accomplished simultaneously with other techniques, then the earlier the better. However, CPR and the use of epinephrine are more important initially if the patient can be ventilated without intubation. (Endotracheal epinephrine may be used.)

4. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of 1mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

ELECTROMECHANICAL DISSOCIATION

This sequence was developed to assist in teaching how to treat a broad range of patients with electromechanical dissociation (EMD). Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. The flow of the algorithm presumes that EMD is continuing. CPR indicates cardiopulmonary resuscitation; IV, intravenous.

Continue CPR

Establish IV access

Epinephrine, 1:10,000, 0.5-1.0 mg IV push [a]

Intubate when possible [b]

(Consider bicarbonate) [c]

Consider Hypovolemia,

Cardiac Tamponade,

Tension Pneumothorax,

Hypoxemia,

Acidosis,

Pulmonary Embolism

NOTES:

1. Epinephrine infusion should be repeated every 5 minutes.

2. Intubation is preferable. If it can be accomplished simultaneously with other techniques, then the earlier the better. However, epinephrine is more important initially if the patient can be ventilated without intubation.

3. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of 1 mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with sustained PSVT. Some patients may require care not specified herein. This algorithm should be not construed as prohibiting such flexibility. The flow of the algorithm presumes PSVT is continuing.

Unstable	Stable
Synchronous Cardioversion 75 - 100 Joules	Vagal Maneuvers
Synchronous Cardioversion 200 Joules	Verapamil, 5 mg IV
Synchronous Cardioversion 360 Joules	Verapamil, 10 mg IV (in 15-20 min)
Correct underlying abnormalities	Cardioversion, Digoxin B-Blockers, Pacing as indicated

Pharmacological Therapy - Cardioversion

If conversion occurs but PSVT recurs, repeated electrical cardioversion is not indicated. Sedation should be used as time permits.

BRADYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with bradycardia. Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. A-V indicates atrioventricular.

Slow Heart Rate (<60 beats/min) [a]

Sinus or Junctional	Second Degree A-V Block Type I	Second Degree A-V Block Type II	Third Degree A-V Block
Signs or Symptoms [b]		Signs or Symptoms [b]	
No	Yes	No	
Observe	Atropine, 0.5-1.0 mg	Transvenous Pacemaker	
Continued Signs and Symptoms b			
	No		Yes

For Second Degree Type II or Third Degree:

For Second Degree Type I, sinus or junctional:

Repeat Atropine, 0.5-1.0 mg.

Continued Signs/Symptoms [b]

Transvenous Pacemaker
Yes

Observe

External Pacemaker [c]
or
Isoproterenol, 2-10 mg/min [c]

Transvenous Pacemaker

NOTES:
1. A solitary chest thump or cough may stimulate cardiac electrical activity and result in improved cardiac output and may be used at this point.

2. Hypotension (BP <90 mm Hg), PVCs, altered mental status or symptoms (e.g., chest pain, dyspnea), ischemia, or infarction.

3. Temporizing therapy.

VENTRICULAR ECTOPY: **ACUTE SUPPRESSIVE THERAPY**

This sequence was developed to assist in teaching how to treat a broad range of patients with ventricular ectopy. Some patients may require therapy not specified herein. This algorithm should not be construed as prohibiting such flexibility.

Assess for need for Acute Suppressive Therapy

Rule out treatable cause

Consider serum potassium

Consider digitalis level

Consider bradycardia

Consider drugs

Lidocaine, 1 mg/kg

If not suppressed, repeat lidocaine, 0.5 mg/kg every 2-5 min. until no ectopy, or up to 3 mg/kg given. If not suppressed, procainamide 20 mg/min until no ectopy, or up to 1,000 mg given

If not suppressed, and not contraindicated, bretylium, 5-10 mg/kg over 8-10 min.

If not suppressed, consider overdrive pacing
Once ectopy resolved, maintain as follows:

After Lidocaine, 1 mg/kg	Lidocaine drip, 2 mg/min
After Lidocaine, 1-2 mg/kg	Lidocaine drip, 3 mg/min
After Lidocaine, 203 mg/kg	Lidocaine drip, 4 mg/min

After Procainamide	Procainamide drip, 1-4 mg/min (check blood level)
After Bretylium	Bretylium drip, 2 mg/min

(6) Assess patient status and precipitating factors to prevent further decompensation of the patient.

5. Provide post defibrillation care.

(a) Perform a complete base-line physical assessment of patient. Assess vital signs, peripheral pulses, respiratory pattern, and level of consciousness.

(b) Monitor ECG rhythm watching for arrhythmias.

(c) Obtain a 12 lead ECG to assess myocardial damage.

(d) Administer oxygen to reduce hypoxemic state.

(e) Assess chest wall for any burns. Apply Silver Sulfadiazine to any burned areas.

(f) Establish an IV line for medication administration, if not present.

(g) Administer prescribed medications IAW Physician Orders.

(1) Monitor drips of antidysrhythmic drugs (lidocaine) carefully.

(2) Observe patient and ECG pattern for medication effects.

6. Document defibrillation on Cardiac Arrest Flow Sheet. Record the following:

(a) Ventricular fibrillation was observed on monitor. If available, include pre-defibrillation ECG rhythm strip.

(b) Number of times defibrillation was attempted.

(c) Voltage used with each attempt.

(d) Post-defibrillation ECG rhythm. Include an ECG rhythm strip if available.

(e) Physiological multisystem status.

(f) Death.

F. **PRECAUTIONS:**

1. Check that equipment is properly grounded to prevent current leakage.

2. Disconnect other electrical equipment attached to patient to prevent possible equipment damage from the voltage surge.

3. Use conductive medium on paddles conservatively to prevent over arcing

of the current flow to the patient.

4. Clean defibrillator of remaining electrical current immediately after use. Never set charged defibrillator paddles down.

5. Check that defibrillator is in non-synchronized mode such that it is not dependent upon an R wave to trigger defibrillation.

G. **COMPLICATIONS**:

1. Dysrhythmias.

2. Cardiac arrest.

3. Respiratory arrest.

4. Neurological impairment.

5. Altered skin integrity.

6. Pulmonary edema.

7. Pulmonary or systemic emboli.

8. Equipment malfunction.

9. Death.

H. **RESPONSIBILITY**:

1. Medical Officer will defibrillate the patient.

2. Nurse will administer medication, assist with CPR, and record to information in the patient's chart.

3. Hospital Corpsman will inspect and maintain the defibrillator equipment and supplies in working order. Supplies for the Sparks Kit will be obtained from Material Management Department.

I. **REFERENCE**:

1. Interim Guideline for Advanced Cardiac Life Support (ACLS), The American Heart Association.

2. Textbook of Advanced Cardiac Life Support (ACLS), The American Heart Association.

TAB C-7

NEEDLE THORACENTESIS

A. PURPOSE: To manage a tension pneumothorax.

B. DEFINITION: Insertion of a large-caliber needle into the thorax to withdraw air thereby restoring ventilation.

C. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. Assorted needles #14 gauge (3 to 6 cm long).

2. Lidocaine 1% with needle and syringe.

3. Surgical prep solution.

4. Dressings.

D. STEPS:

1. Assess the patient's chest and respiratory excursions.

2. Administer oxygen to patient at 12 liters/minute via face mask.

3. Identify the 2nd intercostal space in the mid-clavicular line on the side of the pneumothorax.

4. Surgically prep the chest.

5. Locally anesthetize the area in a conscious patient.

6. Attach a #14 gauge over-the needle catheter (3 to 6 cm long) snugly to a 35 ml syringe.

7. Insert the needle into the skin and direct the needle just over the rib into the 2nd intercostal space.

8. Puncture the parietal pleura.

9. Aspirate as much air as necessary to relieve the patient's acute symptoms.

10. Leave the plastic catheter in place and attach to IV tubing under air seal.

11. Monitor vital signs and breath sounds every 30 minutes.

12. As time permits, insert a chest tube.

E. **RESPONSIBILITY**:

Medical Officer.

F. REFERENCES:

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-8

MAST (ANTI-SHOCK TROUSERS)

A. PURPOSE: To manage shock by raising systolic pressure. The MAST trousers increase peripheral vascular resistance and increase myocardial afterload. Also used with pelvic fractures.

B. DEFINITION: Application of pressure against the lower extremities and abdomen to translocate venous blood to vital organs thereby increasing blood pressure.

C. INDICATIONS:

1. Splinting and hemorrhage control for pelvic fractures during transport.

2. Tamponading soft tissue hemorrhage.

3. Stabilizing multiple leg fractures.

4. Stabilizing the circulation for long-distance transport.

5. Maintaining perfusion of the upper torso when IVs cannot be started for IV therapy, or when volume replacement is not adequate.

D. CONTRAINDICATIONS:

1. Pulmonary edema.

2. Circulatory instability due to myocardial dysfunction.

3. Head injuries (debatable).

E. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. MAST (Anti-shock Trousers) (3 sets only).

2. BP cuff.

3. Stethoscope.

4. SF 600, Chronologic Record of Patient Care, TAB J-4.

F. CRITERIA:

1. MAST will be used only for those conditions indicated above.

2. MAST will be deflated gradually when patient's blood pressure has reached an acceptable level; such as 90/60.

3. Deflation will be halted if blood pressure falls 5mm Hg. inflation level will be held while fluids are increased before resuming deflation.

4. Deflation will begin at abdominal segment.

G. STEPS:

1. Record vital signs noting blood pressure.

2. Obtain MAST.

3. Apply the MAST.

(a). Unfold the trousers and lay flat on long spine board if needed.

(b) Slide trousers underneath patient.

(c) Fold the trousers about the left leg first and fasten.

(d) Fold the trousers about the right leg and fasten.

(e) Fold the trousers about the abdomen and fasten.

(f) Attach air tubes to the pant connections being sure all stopcocks are open.

4. Inflate the MAST.

(a) Recheck vital signs.

(b) Close abdominal valve.

(c) Inflate the legs.

(d) Close both leg valves and open abdominal valve.

(e) Inflate abdomen.

(f) Determine amount of inflation by patient's perfusion status Monitor BP until acceptable level is met.

(g) When the optimal BP is obtained, turn stopcock to hold position.

5. Monitor patient's BP and add pressure to trousers as needed.

6. Insert two large-caliber IV catheters in peripheral veins to infuse fluids.

7. Monitor ECG.

8. Precautions.

MAST auto inflate with altitude and warm air. Monitor inflation during ascent and descent and when changing from cold to warm or warm to cold conditions.

9. Deflate MAST slowly.

(a) Deflation depends upon blood pressure readings. Stop deflation if blood pressure falls 5mm Hg. Hold trouser pressure until additional fluids are infused and patient's blood pressure returns to acceptable level.

(b) Deflate the abdominal segment first.

(c) Deflate one leg at a time.

10. Do not deflate trousers to transport a patient.

H. RESPONSIBILITY:

Medical Officer.

I. REFERENCE:

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-9

SECONDARY ASSESSMENT

A. PURPOSE: To survey every section of body to identify all injuries sustained.

B. DEFINITION: In-depth evaluation of whole body using look, listen, and feel techniques.

C. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. Stethoscope.
2. BP cuff.
3. Otoscope/ophthalmoscope.
4. Rubber gloves.
5. KY lubricant.
6. Hemocult or guaiac test.
7. Percussion hammer (reflex).

D. CRITERIA:

1. All sections of body will be assessed.
2. Findings will be recorded on SF 600 admission assessment.

E. SYSTEM TO REVIEW:

1. Head and skull.
   (a) Inspect.
   (b) Palpate.
   (c) Re-evaluate pupils (size, reaction to light).
   (d) Check visual acuity using Snellen Eye Chart or alternate.
   (e) Check cranial nerve function.
2. Maxillofacial.
   (a) Inspect.
   (b) Palpate.
   (c) Considered high priority if airway is obstructed.
3. C-Spine/neck.

Assume patients with head and/or maxillofacial trauma from a blunt injury have cervical spine fractures.

(a) Inspect.

(b) Palpate.

(c) Validate injury with lateral, crosstable C-spine x-ray.

4. Chest.

(a) Six potentially lethal conditions are:

(1) Pulmonary contusion.

(2) Aortic disruption.

(3) Tracheobronchial disruption.

(4) Esophageal disruption.

(5) Traumatic diaphragmatic hernia.

(6) Myocardial contusion.

(b) Inspect anterior and posterior sides, neck veins.

(c) Palpate entire rib cage.

(d) Auscultate breath sounds, heart sounds.

5. Abdomen.

(a) Inspect.

(b) Auscultate bowel sounds/bruit.

(c) Palpate.

6. Perineum/rectum.

(a) Inspect perineum .

(b) Perform rectal exam to check:

(1) Quality of sphincter tone.

(2) Integrity of rectal wall.

(3) Presence of pelvic fractures.

(4) Presence of blood.

7. Extremities for fractures.

(a) Five life-threatening extremity injuries to observe are:

(1) Massive, open fractures with ragged, dirty wounds.

(2) Bilateral femoral shaft fractures - open or closed.

(3) Vascular injuries, with or without fractures, proximal to the knee or elbow.

(4) Crush injuries of the abdomen and pelvis, major pelvic fractures.

(5) Traumatic amputations of the arm or leg.

(b) Eight limb-threatening extremity injuries to observe are:

(1) Fracture - dislocation of the ankle with or without vascular compromise.

(2) Tibial fractures with vascular impairment.

(3) Dislocation of the knee or hip.

(4) Wrist and forearm fractures with circulatory interruption.

(5) Fractures or dislocations about the elbow.

(6) Crush injury.

(7) Amputations, complete or incomplete.

(8) Open fractures.

(c) Observe perfusion.

(d) Inspect for deformities, alignment.

(e) Palpate for tenderness, crepitation, abnormal movement.

(f) Palpate peripheral pulses.

8. Neurologic exam.

(a) Do sensorimotor evaluation.

(b) Check for paralysis.

(c) Check for paresis.

(d) Check vertebrae.

(e) Re-evaluate level of consciousness using Glasgow Coma Scale.

9. Burns.

(a) Assess body surface burned according to "Rule of Nines" (Enclosure C-A).

(b) Assess depth of burns (first, second, third degree).

(c) Weigh or estimate patient's weight.

10. Turn patient over to assess for entrance and exit wounds.

11. Order x-rays, laboratory tests, and special studies as needed to enhance, validate assessment.

F. RESPONSIBILITY:

Medical Officer.

G. REFERENCE:

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-A

RULE OF NINES, HOSPITAL MANAGEMENT OF SEVERE BURNS

The "RULE OF NINES" is used in the hospital management of severe burns to determine fluid replacement. It is also useful as a practical guide to determine critical and minor burn care.
The adult body is generally divided into surface areas of 9% each and/or fractions or multiples of 9% (see illustration below).
Examples of burns acquired in combat requiring hospital treatment:

A. Full-thickness burns.

B. Partial-thickness burns exceeding 5% BSA.

C. Any serious burns of the face, hands, or feet.

D. Burns of the perianal and genital areas.

E. Burns that cross flexion creases.

TAB C-10

CHEST TUBE INSERTION

A. **PURPOSE:** To assist re-expansion of a lung by providing a system that will collect fluid drainage, blood, or air from the pleural cavity.

B. **DEFINITION:** Insertion of a tube into thorax that is connected to an underwater suction device to cause negative pressure thereby permitting the lung to re-inflate.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Chest tube 32FR or 36F.
2. Large sterile hemostat.
3. Tubing with straight catheter.
4. Chest tube clamps (2).
5. Underwater seal bottle or device (Pleura-Evac).
6. Scalpel blade and handle.
7. Suture (i.e. #1 silk or 0 nylon).
8. Betadine prep solution.
9. Lidocaine 1% with needle and syringe.
10. Dressing (xeroform gauze, 4x4).
11. Tape, water proof.
12. Sterile gloves.
13. Irrigating syringe (Toomey).
14. Suction machine (high thoracic).

NOTE: Best to have chest tube tray preassembled.

D. **CRITERIA**:

1. Aseptic technique will be used.
2. Lungs inflate after chest tube is inserted.

E. **STEPS:**

1. Obtain supplies. Prepare pleura-evac.

(a) Fill suction column to 20-cm level with sterile water using Toomey syringe as a funnel.

(b) Fill water-seal column to 2-cm level with sterile water.

(c) Label Pleura-Evac with date and time it was initiated.

2. To insert the chest tube:

(a) Determine the insertion site: Usually the nipple level (5th intercostal space) anterior to the mid-axillary line on the affected side.

(b) Prep and drape the chest at the predetermined site.

(c) Anesthetize the skin and rib periosteum using 1% Lidocaine.

(d) Make a 2 to 3 cm transverse incision at the site and bluntly dissect through the subcutaneous.

(e) Puncture the parietal pleura with the tip of a clamp and put a gloved finger into the incision to clear any clots.

(f) Clamp the distal end of the thoracotomy tube and advance the thoracotomy tube into the pleural space to the desired length.

(g) Look for "fogging" of the chest tube with expiration or listen for air movement.

(h) Connect the end of the thoracostomy tube to an underwater seal apparatus with 20 to 30 cm of water pressure.

(i) Suture the tube in place.

(j) Apply a dressing and tape the tube to the chest.

(k) Secure all connection sites with waterproof tape.

3. Post chest tube insertion.

(a) Activate suction by connecting short tubing from suction control chamber to suction machine. Increase suction until slight bubbling appears in suction chamber.

(b) Obtain a chest x-ray.

(c) Obtain ABGs as necessary.

(d) Monitor for air leaks every four hours or more frequently if indicated.

(e) Monitor vital signs and breath sounds every 2 hours, or more frequently if indicated.

(f) Notify Medical Officer for any acute changes (i.e. dyspnea, loss of breath sounds to affected side or non-affected side).

(g) Observe for asymmetrical chest movement.

(h) Measure drainage.

(1) Mark level of drainage with date and time at least once a watch or as ordered.

(2) Report drainage on intake and output worksheet.

(3) If drainage output exceeds 60ml/hour, measure hourly and notify Medical Officer.

(i) Milk tubes to maintain patency.

(1) Apply lotion to hand used for milking.

(2) Secure and occlude drainage tube with other hand just below connection to chest tube.

(3) With lubricated hand about 2 inches (5 cm) below, occlude and milk the tube by pulling away from the patient a distance of 6 inches (10 to 15 cm).

(4) Release slowly to prevent "snap" of air back into patient's chest.

(j) Always keep drainage system below level of patient's chest and stabilize Pleura-Evac.

F. COMPLICATIONS:

1. Chest tube dislodgment from chest wall or disconnection from underwater-seal apparatus.

2. Chest bottle elevated above level of chest.

3. Chest tube kinking or clogging.

4. Introduction of pleural infection

5. Persistent pneumothorax.

6. Persistent hemothorax.

G. RESPONSIBILITY:

1. Medical Officer for insertion.

2. Nurse for monitoring.

H. REFERENCE:

Advanced Trauma Life Support Manual, American College of Surgeons.

TAB C-11

PERITONEAL LAVAGE

A. **PURPOSE:** To diagnose occult intra-abdominal bleeding and to assess for biliary or intestinal injury.

B. **DEFINITION:** Operative procedure performed by a surgeon for diagnosing intra-abdominal bleeding.

C. **INDICATIONS**:

Blunt abdominal injury.

D. **CONTRAINDICATIONS**:

1. History of multiple abdominal operations.

2. Free air, peritonitis, and penetrating trauma to abdomen.

E. **EQUIPMENT SUPPLIES, AND FORMS REQUIRED:**

1. One liter Ringer's lactate solution.

2. Peritoneal dialysis catheter-set-up.

3. Lidocaine.

4. Needle and syringe.

5. Surgical prep disinfectant.

6. Knife with handle.

7. Hemostats.

F. **CRITERIA:**

Surgical procedure will be carried out using aseptic technique.

G. **STEPS**:

1. Preliminary measures.

(a) Insert a urinary catheter to empty bladder.

(b) Insert an NG tube to decompress stomach.

2. Obtain all equipment and place on surgical tray.

3. Surgically prep the abdomen.

4. Inject lidocaine to locally anesthetize the area.

5. Vertically incise the skin and subcutaneous tissues to the fascia.

6. Incise the fascia and peritoneum.

7. Insert a peritoneal dialysis catheter into the peritoneal cavity.

8. Advance and direct catheter toward either the left or right pelvis.

9. Connect the dialysis catheter to a syringe and aspirate.

10. If gross blood is not obtained, instill 10 ml/kg of Ringer's lactate into the peritoneum.

11. Gently agitate the abdomen to mix fluid throughout the peritoneal cavity.

12. Allow fluid to remain 5-10 minutes before siphoning off.

13. To siphon, place a Ringer's lactate vented container on the floor. It will take 20 to 30 minutes for drainage.

14. From the fluid returned, collect a sample and send to lab for erythrocyte count (un-spun), white blood cell count, bile and food fibers examination. If count of 100,000 RBC/ml or more, 500 WBC/ml or more, bile or food particles is positive, then surgery is indicated.

15. A negative test does not rule out retroperitoneal injuries.

H. **COMPLICATIONS**:

1. Hematoma, local or intraperitoneal.

2. Hemorrhage, secondary to injection of local anesthetic, incision of the skin or subcutaneous tissues.

3. Laceration of bladder (if not emptied before procedure).

4. Injury to other abdominal organs.

I. **RESPONSIBILITY**:

Medical Officer.

H. **REFERENCE**:

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-12

AIR SPLINT

A. **PURPOSE:** To immobilize the extremity to prevent further injury and to control pain.

B. **DEFINITION:** Splint made of plastic that is inflated.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Air splint.

D. **CRITERIA:**

1. Assessments of distal pulses, skin color, and temperature will be done prior to and during splinting.

2. Splints will extend one joint above and below the fracture site if possible.

3. Air splints will be inflated to allow a finger width of space between the extremity and the splint.

4. Two persons will apply splints.

E. **STEPS:**

1. Assess distal pulses, skin color, and temperature prior to applying the splint.

2. Select appropriate size and type of air splint.

3. Dress open wounds with sterile dressings.

4. Remove all clothing or jewelry on extremity.

5. Apply the splint.

(a) Use splint that is unzipped and deflated.

(b) Have assistant hold proximal traction on extremity.

(c) Grab patient's hand or foot and slide splint over your hand onto the extremity.

(d) Position splint one joint above and below fractured site. If applied to the arm, extend splint beyond the end of the fingers.

(e) Maintain traction proximally and distally while inflating.

(f) Inflate splint to the point at which the finger will make a slight dent against the splint.

6. Monitor circulation checks and pressure of splint every 30 minutes.

7. Do not take x-rays until after splint is applied.

F. **RESPONSIBILITY:**

Two HMS on treatment team.

G. **REFERENCE:**

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-13

THOMAS RING LEG TRACTION SPLINT

A. **PURPOSE:** To immobilize the lower extremity to prevent further injury and to control pain.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

Thomas Ring leg traction splint (stored in Specialty Treatment - orthopedic area).

D. **CRITERIA:**

1. Assessments of distal pulses, skin color, and temperature will be done prior to and during splinting.

2. Manual traction will be performed during the application of the traction device.

3. Two persons will apply splint.

E. **STEPS**:

1. Obtain Thomas Ring leg traction splint.

2. Measure the unaffected leg with the traction splint.

(a) Place upper cushioned ring under the buttocks, adjacent to the ischial tuberosity.

(b) Place two support straps above the knee and two below the knee.

3. Dress open wounds.

4. Have one person support the leg while the other removes the shoe and sock to perform a circulatory check.

5. Have one person apply manual traction to the leg, while maintaining support under the fracture and the calf.

6. Reassess the distal pulse after applying manual traction.

7. Have one person maintain manual traction on the leg, while the other applies the ankle hitch around the patient's ankle and upper foot. Make the bottom strap the same length or shorter than the two upper cross straps.

8. Gently lift the fractured limb while maintaining support and traction. Slide the splint under the affected leg, with the padded upper ring snugly against the ischial tuberosity.

9. Gently lay the leg on the splint and extend the leg elevator. Snugly attach the top strap first.

10. Attach the ankle hitch to the traction hook while supporting the leg.

11. Apply traction gently to the leg by turning the windlass knob until the extremity appears stable, or in the conscious patient, until pain and

spasm are relieved.

12. Reassess the distal, pedal pulses.

13. Secure the remaining straps.

14. Continually check circulation to the affected extremity.

F. **RESPONSIBILITY:**

1. Two HMs on treatment team.

2. Medical Officer.

G. **REFERENCE:**

Advanced Trauma Life Support Course Manual, American College of Surgeons.

TAB C-14

TREATMENT OF CHEMICAL BURNS

A. **PURPOSE:** To inactivate the chemical to prevent further tissue injury.

B. **DEFINITION:** Burn caused by chemical such as strong acids, caustic, or white phosphorus.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Water.

2. IV setup and solution.

3. Dressings.

4. Copper sulfate wet soaks.

5. Calcium gluconate solution.

6. Gloves.

D. **STEPS:**

1. Wear gloves when handling contaminants.

2. Remove clothing with any chemical on it into a linen bag.

3. Wash affected area with copious amounts of tepid or cool water for 15 minutes. Use sink for hands or feet and shower for larger areas.

4. Replace fluids by inserting an IV and infusing Lactated Ringers solution.

5. Debride wound and dress IAW burn protocol.

6. Administer Tetanus Toxoid prophylactically.

7. Neutralize hydrofluoric acid burns by infiltrating wound with 10% solution of calcium gluconate. Use ½ ml of calcium gluconate per cm squared of area involved.

8. For phosphorus burns, cover areas with copper sulfate wet soaks. This will stain phosphorus particles dark. Remove each dark particle with needle or knife. Place particles in water container. Use care not to touch particles or get on self during removal.

E. **RESPONSIBILITY:**

Medical Officer.

TAB C-15

TREATMENT FOR VENOMOUS SNAKE BITE

A. **PURPOSE:** To identify if snake was venomous and treat patient with anti-venin to counter the toxic effects from venom.

B. **TYPES OF POISONOUS SNAKES:**

1. Pit vipers - rattlesnake, copperhead, and water moccasin.

2. Coral snake.

3. Yellow bellied sea snake.

4. Cobra.

5. Exotic snakes.

C. **CHARACTERISTICS OF POISONOUS SNAKE BITES**:

1. Usually see teeth marks with fang marks on skin.

2. Toxic venom is released that can be neurotoxic (poisonous to nervous system), hematoxic (poisonous to the circulatory system) or a combination of the two.

(a) Neurotoxic venom from coral, cobra and exotic snakes causes:

(1) Ptosis - early symptom.

(2) Severe headache.

(3) Dizziness.

(4) Blurred vision or blindness.

(5) Hearing difficulty.

(6) Fever or chills.

(7) Vomiting.

(8) Little or no pain and swelling at bite site.

(9) Paresthesias.

(10) May also affect circulatory system.

(11) Often symptoms do not develop immediately so patients must be hospitalized for 24 hours for observation.

(b) Hematoxic venom from pit viper snakes causes:

(1) Immediate pain.

(2) Swelling at the site of the bite.

(3) Petechiae, ecchymosis, serous or hemorrhagic bullae.

(4) Shock and weakness.

(5) Hypotension.

(6) Tourniquet (i.e. elastic band).

3. The severity of symptoms depends on the amount of venom injected by the snake and whether it was injected into a blood vessel, muscle, or fatty tissue.

D. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Antivenin. (If available, must be refrigerated. Check with Pharmacy about maintenance after hospital is established.)

2. IV set up and normal saline or Lactated Ringers solution.

3. Indwelling urinary catheter.

4. Cardiac monitor.

5. Tape measure.

E. **STEPS:**

1. At location where envenomation occurred.

(a) Move victim from the vicinity of the snake to prevent multiple bites from occurring.

(b) Have victim lie down and remain quiet.

(c) Identify or secure snake if possible. Do not handle the snake.

(d) Immobilize the involved extremity at or below the level of the heart.

(e) Do not give victim anything to eat or drink, especially alcohol.

(f) If no signs of envenomation are present, evacuate to nearest medical facility.

(g) If signs of envenomation are present:

(1) Apply a constricting band between the bite site and the heart at a point two to four inches above the site of the bite or swelling.

(2) Band should be loose enough to get small finger between band and the skin. This constricts venous and lymphatic flow but not arterial flow.

(3) Check the distal pulse regularly and loosen the band as necessary to maintain circulation.

(4) If swelling progresses up the extremity, reapply the band ahead of swelling.

(h) Evacuate victim to nearest medical facility.

(i) If medical facility is more than one hour away, perform incision and suction.

(1) Make an incision 1/8 inch deep and ½ inch long over the fang mark parallel to the long axis of the extremity.

(2) Suction for one hour using mechanical or oral means. Do not use mouth suction if rescuer has mouth lesions that might absorb venom. Do not make incision if more than 15 minutes has elapsed since time of bite.

(j) Wash bite area with soap and water.

(k) Monitor airway, breathing, and circulation every 15 minutes while being transported.

2. At Combat Zone Hospital, Casualty Receiving Area:

(a) Observe airway, respiratory and cardiac status using life saving equipment as needed.

(b) Do not release constricting band until IV line is in place and antivenin is ready to be given.

(c) Insert a large bore IV in non-involved extremity and infuse normal saline or Lactated Ringers solution.

(d) Draw blood samples for CBC, platelets, PT, PTT, Na, K, Ca, Cl, BUN, creatinine and type and cross match.

(e) Do an EKG tracing and connect leads to the cardiac monitor.

(f) Monitor vital signs every 15 minutes.

(g) Measure circumference of extremity at site of bite and about five inches proximal. Use these measurements to monitor the spread of venom and effect of antivenin.

(h) Concurrently obtain a detailed history about bite.

(1) Positively identify snake if available.

(2) Note time of bite, first aid given.

(3) Note symptoms.

(4) Get brief medical history.

(i) Perform physical exam with emphasis on cardio respiratory system. If bite other than a pit viper is suspected, perform a complete neurological exam.

(j) Determine severity of the bite using the following scale:

Grade O:	No evidence of envenomation but history of suspected snake bite.
Grade I:	Minimal envenomation, fang wound present, moderatelocalized pain, 1-5 inches of enema and

redness around site but no systemic involvement after 12 hours.

Grade II: Moderate envenomation, severe, wide-spread pain, edema, redness spreading to trunk, nausea,vomiting and mild temperature.

Grade III: Severe envenomation, rapidly progressive course, generalized ecchymoses, petechiae, with systemic involvement including rapid pulse, shock like state, and subnormal temperature.

Grade IV: Very severe envenomation, sudden pain, rapidly progressive swelling to trunk, ecchymoses, bleb formation and necrosis. Systemic manifestations including shock and death may occur within minutes of bite.

(k) Administer antivenin if available. Test patient for sensitivity to horse serum prior to giving antivenin. Inject 0.02 ml of normal horse serum diluted in 1:100 ml solution intra-cutaneously and wait 5-30 minutes to observe wheal for redness.

(l) Administer antivenin particular for type of snake involved.

(1) For snakes causing neurotoxic effects, administer antivenin before neurological changes develop as toxicity of venom has rapid onset.

(2) For pit vipers, dosage and site used are based upon gradation of bite. Grades II, III, and IV are administered intravenously.

(3) Administer subsequent doses based upon clinical response.

(4) The smaller the body of patient, the larger the initial dose required.

(m) Start a second IV to administer any medications or blood\products.

(n) Administer tetanus toxoid prophylactically.

(o) Insert indwelling urine catheter, obtain urinalysis specimen and measure output hourly.

(p) Transfer to ICU ward for close monitoring.

(q) If antivenin is not available, air evacuate patient to medical facility that has antivenin.

F. **RESPONSIBILITY:**

Medical Officer.

TAB C-B

CLINICAL MANIFESTATIONS AND MANAGEMENT OF SNAKEBITE

Snakebite envenomation

History of snakebite

Elevate affected extremity and transport patient

DO NOT APPLY ICE

DO NOT ADMINISTER ALCOHOL

DO NOT APPLY TOURNIQUET

Evaluation

Swelling

Ecchymosis

Pain

Fang or scratch marks

Hypotension

Vomiting

Weakness

Paresthesias

Positive for any of the above	Negative for all of the above
Antivenin skin test Antivenin therapy Type and crossmatch CBC Coagulation studies	Observe for 6-8 hours

Intensive care monitoring

TAB C-16

TREATMENT FOR HEAT CRAMPS

A. **PURPOSE:** To reduce cramps by replacing salt lost from the body.

B. **DEFINITION:** Cramps in voluntary muscles secondary to loss of body salt.

C. **SYMPTOMS:**

1. Painful cramps of muscles used during work (arms, legs, abdomen, back).

2. Normal body temperature.

D. **PREDISPOSING FACTORS:**

1. Heavy sweating during work in hot environment.

2. Drinking large volumes of water without replacing salt loss.

3. Not eating MRE (Meals Ready To Eat) food that is high in salt.

4. Diuretics and other drugs.

5. Alcohol.

E. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. IV set up with normal saline solution.

2. Electrolyte fluids (gatorade).

F. **STEPS:**

1. Offer gatorade oral fluids.

2. If nauseated and unable to take oral fluids, start an IV and administer 1000 ml of normal saline solution.

3. Stay out of hot sun to rest.

G. **RESPONSIBILITY:**

Medical Officer.

TAB C-17

TREATMENT OF HEAT EXHAUSTION

A. **PURPOSE:** To promote the return of blood to the heart and rapidly cool the body to a normal body temperature.

B. **DEFINITION:** More severe heat problem characterized by excessive loss of water and salt from the body.

C. SYMPTOMS:

1. Profuse perspiration.

2. Skin pale, or flushed, cool.

3. Fatigue, extreme weakness.

4. Headache, giddiness, mental confusion, but usually conscious.

5. Anorexia, nausea and vomiting.

6. May faint on standing with rapidly thready pulse and low BP.

7. Oral temperature normal or low but rectal temperature elevated (99-101 degrees F or 37.5 - 38.5 degrees C).

D. PREDISPOSING FACTORS:

1. Sustained exertion in heat (especially increased temperature and humidity combined).

2. Lack of acclimatization.

3. Failure to replace water and/or salt loss in sweat.

E. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. Electrolyte fluids (gatorade).

2. IV set up with normal saline solution.

3. Rectal thermometer.

F. STEPS:

1. Place patient in tent near fan.

2. Elevate the feet and massage the extremities.

3. Administer freely electrolyte fluids by mouth.

4. If unable to take oral fluids, start an IV and infuse 2000 ml of normal saline solution.

5. Monitor VS, BP for one hour.

G. RESPONSIBILITY:

Medical Officer.

TAB C-18

TREATMENT FOR HEAT STROKE (HYPERTHERMIA)

A. **PURPOSE:** To rapidly cool body to get temperature below 102 degrees F or 38.9 degrees C.

B. **DEFINITION:** Most severe heat problem with a high mortality rate. It is failure of thermoregulatory control with core body temperature exceeding 106 degrees F.

C. **SYMPTOMS:**

1. Usually onset is sudden.

2. Early symptoms are:

(a) Absence of sweating.

(b) Red, hot, dry skin.

(c) Collapse with loss of consciousness.

(d) Pulse is full, rapid.

(e) BP is normal or elevated.

(f) Respirations are rapid and deep.

(g) Markedly elevated body temperature 106-110 degrees F. or 40.5 degrees C. and greater.

(h) Cramping, twitching, and tenderness of voluntary muscles.

(i) Oliguria.

3. Later symptoms are:

(a) Cyanosis.

(b) Pulse is weak, rapid.

(c) Hypotension.

(d) Respirations are shallow, irregular.

(e) Depressed deep tendon reflexes.

(f) Coma with possible convulsions.

(g) Bleeding disorders.

TAB C-19

TREATMENT FOR HYPOTHERMIA

A. **PURPOSE**: To gradually rewarm the body to get temperature above 95 degrees F.

B. **DEFINITION**:

1. Sustained exertion in heat by unacclimatized workers.

2. Lack of physical fitness and obesity.

3. Recent alcohol intake.

4. Dehydration.

5. History of heat stroke.

6. Diuretics and/or other drugs.

C. SYMPTOMS OF HYPOTHERMIA:

1. Low body temperature (below 95 degrees F.) as determined by a low reading thermometer or approximation by observing above behaviors.

2. Vital sign alternations.

(a) Lower BP.

(b) Pulse is slow, irregular, and difficult to palpate.

3. Respiratory alterations.

(a) Increased respirations during mild stages.

(b) Diminished respirations as temperature falls below 92 degrees F. until no longer detectable.

4. Level of consciousness alternations.

(a) Poor coordination - repeated stumbling, poor control of arms and legs.

(b) Careless attitude, decreased attention span, dazed memory lapses.

(c) Drowsiness, blurred speech, confusion.

(d) Weakness, slowing pace, unable to maintain muscle movement.

(e) Disoriented with possible hallucinations.

(f) Collapse, unconsciousness.

5. Shivering.

(a) Increasingly vigorous and uncontrollable near a core temperature of 95 degrees F.

(b) Steadily diminishes as temperature decreases.

(c) Between 86-90 degrees F. shivering is replaced by muscular rigidity.

6. General appearance.

(a) Pallor.

(b) Skin is very cold to touch, edematous.

7. Pupils.

(a) Begin to dilate at a core temperature near 92 degrees F.

(b) Fully dilated and poorly reactive at around 86 degrees F.

D. **PREDISPOSING FACTORS:**

1. Race.

Blacks have a 6:1 ratio of more cold-related injuries compared to caucasians.

2. Geographical origin.

Persons from warm regions are more susceptible to cold injuries.

3. Psychological factors.

Passive, negativistic personality type is more susceptible.

4. Fatigue.

5. Rank.

Lower ranks suffer more cold weather problems.

6. Previous cold injury.

7. Activity.

Under and over activity.

8. Medications, drugs, alcohol that interfere with thermoregulatory action of hypothalamus.

E. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Tub of water and ice if possible.

2. Ice packs for groin and axillae areas.

3. Sheets.

4. Hypothermia blanket (if available).

5. Oxygen equipment.

6. IV set up and normal saline solution.

7. Rectal thermometer.

8. Cardiac monitor.

9. Indwelling urinary catheter with collecting bag.

F. **STEPS:**

1. Remove patient's clothes.

2. Submerge in tub of water and ice. Remove when rectal temperature reads 102 degrees F. to prevent rebound hypothermia.

3. Continually massage extremities to promote vasodilation and heat loss.

4. Alternative is to wrap in wet sheet and blow with fan.

5. After temperature has reached 100 degrees F., place on field bed and wrap in blanket.

6. Monitor rectal temperature every 10 minutes. It is dangerous to lower temperature below 100 degrees F. because there could be a rapid fall in temperature to critical levels.

7. If temperature starts to rise, wrap a wet sheet around patient and turn on fan.

8. Start an IV and administer normal saline solution cautiously.

9. Monitor V.S., BP, and level of consciousness every 15 minutes.

10. Insert an indwelling urinary catheter and measure output hourly.

11. Administer oxygen via nasal or nasal prongs if cyanosis is present.

12. Monitor central venous pressure (CVP).

G. **POTENTIAL COMPLICATIONS:**

1. Relapse of high temperature.

2. Headache for several weeks afterwards.

3. Renal failure.

4. Disseminated intravascular coagulation (DIC).

5. At high risk for second attack of heat stroke, if work in hot environment.

H. **RESPONSIBILITY:**

Medical Officer.

TAB C-20

TREATMENT OF COLD INJURY TO EXTREMITY

A. **PURPOSE:** To rewarm the extremity gradually to determine degree of injury and treat accordingly.

B. **DEFINITION**:

1. Two types of cold injuries are:

(a) Freezing type - Frostbite (superficial or deep) resulting from exposure to temperatures below the freezing point.

(b) Non-freezing type - Chilblains, trenchfoot, and immersion foot resulting from prolonged exposure of feet to wet cold.

2. Four degrees of cold injury are:

(a) First Degree (Hyperemia and Edema) - After rewarming the skin becomes mottled, cyanotic, red, hot, and dry. There is intense itching or burning, and a later deep ache. Swelling begins within 3 hours and may last 10 days. Peeling of skin may begin within five to 10 days after injury and continue for a month.

(b) Second Degree (Hyperemia and Blister Formation) - Blisters appear 6 to 12 hours after injury. The blisters dry forming black eschars 10 to 24 days after rewarming.

(c) Third Degree (Necrosis of Skin and Cutaneous Tissue) - Vesicles may be present but are violet in color, smaller and do not extend to end of digits. Edema of entire foot appears in 6 days. Skin overlying the injury forms a black, hard, dry eschar. Healing takes over two months.

(d) Fourth Degree (Complete Necrosis and Loss of Tissue) - Eschar formation and gangrene may not be evident for 2 to 3 weeks after injury. The result will be amputation of part.

C. **SYMPTOMS**:

1. Early warning signs not always present are: tingling, stinging, and dull ache followed by numbness.

2. Skin appears red briefly, but then becomes pale or waxy white.

3. Tissue is a little hard, brittle.

4. Lack of sensation and movement.

D. **PREDISPOSING FACTORS**:

1. Previous cold injury.

2. Wet footgear/socks.

3. Exposure to freezing temperatures for 10 hours. Wind will shorten the time to freezing.

4. Exposure to cold wet for 3 days at a range of 32 to 50 degrees F.

5. Alcohol.

6. Activity.

Too little or too much.

7. Rank.

Lower ranks have more cold injuries to feet.

E. **CRITERIA**:

1. Absolute bed rest will be implemented when patient has a cold injury to foot.

2. Only allowed rewarming methods will be used as indicated below.

F. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Litter rack.

2. Warm blanket.

3. Deep basin.

G. **STEPS**:

1. Remove clothing from site of injury.

2. Cover with blanket.

3. Do not apply medications, salves or ointments to injury site.

4. Do not open blisters.

5. Offer patient hot oral fluids if available.

6. Place patient on litter and elevate lower extremity.

7. Keep on bed rest.

8. Un-thaw frozen extremity quickly in a water bath controlled of 40 degrees C. or 104 degrees F.

9. Never use snow, ice water, grease, massage, walking, or dry heat to un-thaw.

10. If non-freezing injury, do not warm above 37^{o} C or 98^{o} F.

11. May prescribe pain medications or narcotics for pain.

H. **RESPONSIBILITY**:

1. Medical Officer.

2. Podiatrist.

3. Physician Assistant.

TAB C-21

ADMISSION PACKET INVENTORY

A. **SUPPLIES**:

1. Patient identification wristband.

2. DD 600 baggage tags (4).

3. NAVMED 6010/8 Patient's Property Storage Bag and Form (for securing valuables).

B. **FORMS**:

1. Individual Forms.

(a) FHCZ0104 - Casualty Receiving Admission Assessment Record

(b) DD 1076 - Record of Personal Effects (Inventory List to be completed at later date)

(c) SF 518 - Blood or Blood Component Transfusion

(d) SF 519A - Radiological Request

(e) SF 546 - Chemistry I

(f) SF 549 - Hematology

(g) SF 550 - Urinalysis

(h) SF 557 - Miscellaneous

(i) SF 600 - Chronological Record of Medical Care

2. NAVMED 6150/16 - Inpatient record jacket with forms attached:

(a) Left side - NAVMED 6300-5 Admission and Disposition Form.

(b) Right side forms.

(1) SF 539 - Abbreviated Clinical Record

(2) SF 508 - Doctors Orders

(3) SF 507 - Continuation Sheets (5 each)

(4) SF 509 - Doctors Progress Note

(5) SF 510 - Nurses Notes

(6) SF 511 - Vital signs Chart

(7) DD 792 - 24 Hour Intake and Output Worksheet

TAB C-23

CASUALTY WITH UNEXPLODED ORDNANCE EMBEDDED

A. **PURPOSE:** To provide guidance in admitting, processing, and treating a casualty who has unexploded ordnance embedded in a body part.

B. **DEFINITION:** An explosive device (most often from a rifle grenade fired at close range) which has not travelled sufficient distance for fuse detonation and explosion, and is embedded in the body of a casualty.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

Sandbags.

D. **CRITERIA**:

1. Sandbags will be stored outside Casualty Receiving Area.

2. Ordnance removed from the casualty's body without detonation.

3. Ordnance removed from the hospital environment without detonation.

4. Ordnance disposed of safely.

E. **STEPS**:

1. Prepare sandbags.

(a) Casualty Receiving Senior Corpsman is responsible for filling bags with sand and storing bags in a sheltered area outside Casualty Receiving.

(b) Prepare sandbags when setting up area.

2. Care of casualty with unexploded ordnance.

(a) Place casualty in area removed from other casualties and personnel.

(1) Keep casualty outside, if possible.

(2) If inside, stack sandbags around the casualty.

(3) Have absolute minimum of personnel near casualty.

(b) Call Security and have them summon an explosive ordnance disposal expert.

(c) Upon determination of what the ordnance is, take additional safety precautions as determined by the attending surgeon in conjunction with the explosive ordnance disposal expert.

(d) Prepare casualty for removal of ordnance as soon as practicable. If in the OR, stack sandbags around the casualty and immediate operating personnel. All other personnel remain outside the perimeter of sandbags.

(e) Tag inpatient record chart to alert other personnel to the presence of unexploded ordnance prior to transfer from initial intake point.

(f) After removal of the unexploded ordnance, give it to the explosive ordnance disposal expert, who will then dispose of the ordnance in a safe and

appropriate manner.

F. **RESPONSIBILITY**:

1. Casualty Receiving Senior Corpsman.
2. Admitting clerk.
3. Surgeon.
4. Explosive ordnance disposal expert.

TAB C-24

PATIENT PROCEDURES FOR HANDLING EXPATRIATED PRISONERS OF WAR

A. **PURPOSE:** To detail patient handling procedures for expatriated prisoners of war within the fleet hospital.

B. **DEFINITION**:

Expatriated prisoners of war (EPW) - those patients who require treatment who are prisoners of U.S. or allied combat forces.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Restraints (theater command military police or hospital issue).

2. Others as specified in admission procedures (all forms will be marked with the words "Prisoner of War" or "EPW").

D. **STEPS**:

1. Upon presentation of EPW to functional area, notify Security Department.

2. Upon admission to Casualty Receiving, Security will be responsible for the following notifications:

(a) Theater command military police (MP) headquarters.

(b) Executive Officer.

(c) Director of Nursing.

(d) Director of Administration.

3. Perform essential life saving care.

4. Inform MP that custody of patient will not be assumed by hospital staff and that MP will retain custody of EPW until relieved by appropriate MP headquarters staff or patient is transferred to EPW holding center (external to hospital).

5. After treatment, have corpsman or litter bearer escort MP and EPW to next functional area charge nurse. Admissions packet, correctly annotated will be delivered by hand to charge nurse.

6. During course of treatment, patient will be guarded by MP and/or restrained until treatment is terminated.

7. Movement to another functional area will be reported to Security.

8. EPW's will be fed either on the ward or in the general mess. If allowed to eat in the general mess, EPW's will be accompanied by MP guards.

E. **RESPONSIBILITY**:

CMAA/Security.

TAB C-25

PROCEDURE FOR PICK-UP AND DELIVERY OF HOSPITAL LAUNDRY

A. **PURPOSE:** It will be logistically impossible to pick up **and deliver** laundry at each individual ward and CSR. Therefore, this procedure establishes central collection points and the methodology for preparing laundry for turn-in.

B. **DEFINITIONS**: N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Canvas laundry bags.

2. Request for clean linen/laundry.

D. **CRITERIA:** N/A.

E. **STEPS**:

1. Designated Laundry Petty Officer will:

(a) Set up laundry bags, tagging one for bed linen, one for clothing (including patient clothing), and one for contaminated laundry.

(b) Daily at 0800, take the soiled laundry to the nearest Clinical Work Space along with a request for the next day's linen/laundry supply.

(c) Distribute cleaned patient clothing.

2. Linen Control Clerks.

(a) Pick-up and receipt for hospital laundry at each Clinical Work Space.

(b) Collect requests for clean linen/laundry.

(c) Fill requests submitted the previous day and return cleaned patient clothing.

TAB C-26

PROCEDURE FOR HANDLING AND LAUNDERING CONTAMINATED LINENS

A. **PURPOSE:** The Combat Zone Fleet Hospital will generate a significant amount of contaminated linen within the operating rooms and treatment wards. These items will require special handling and laundering to prevent the spread of infection.

B. **DEFINITION:** Contaminated laundry is defined as those items requiring special disinfection and laundering to preclude the spread of infection.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Chlorine bleach solution.

2. Latex gloves.

D. **CRITERIA:** N/A.

E. **STEPS**:

1. Hospital ward personnel will bag contaminated laundry separate from regular laundry. Gloves are to be worn when handling contaminated laundry.

2. Contaminated laundry will be receipted by the Linen Control Clerks and delivered to the laundry.

3. At the Laundry all contaminated laundry will be segregated from that requiring only routine processing.

4. Based on the next day's requirements and current inventory the contaminated laundry will be assigned a processing priority.

5. The contaminated laundry will be processed as follows:

(a) Presoak the contaminated laundry for 60 minutes in a chlorine solution of 50 ppm.

(b) Wash the linen in hot water using a normal cycle.

6. Once laundered these items will be placed in inventory for re-issue.

F. **RESPONSIBILITY:**

The Head, Environmental Health Department is responsible for routinely monitoring the handling and laundering of contaminated items to preclude the spread of infections.

CAUTION: Extreme care must be taken to avoid contact with the contaminated laundry to prevent the spread of infection to laundry and other hospital personnel.

TAB C-27

PROCEDURES FOR RELEASE OF MEDICAL INFORMATION

A. **PURPOSE:** To provide procedures of release of medical information within the hospital.

B. **DEFINITION:** Medical Information - Information contained in the health or dental record of individuals who have undergone medical examination or treatment.

C. EQUIPMENT, SUPPLIES, AND FORMS REQUIRED: N/A.

D. **STEPS**:

Upon presentation of requests for medical information refer to procedures contained in the following references:

1. Manual of the Medical Department.

2. Freedom of Information Act, BUMEDINST 5720.8.

3. Personal Privacy and Rights of Individuals Regarding Records, SECNAVINST 5211.5.

4. Availability of Navy Records, Policies, SECNAVINST 5720.42.

E. **GENERAL GUIDELINES**:

1. Information contained in health care records of individuals who have undergone medical or dental examination or treatment is personal to the individual and is therefore considered to be of a private and confidential nature. Information from such health care records, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, should not be made available to anyone except as authorized by the patient or as allowed by the provisions of Manual of the Medical Department and the Privacy Act of 1974 as implemented by SECNAVINST 5211.5 series.

2. Release of information will be coordinated by the Patient Affairs Officer.

3. Personal information of non-medical nature will not be released.

4. personnel in the patients chain of command may be provided with information required to conduct command business but will be referred to the Patient Affairs Office.

5. Release of information will conform to local command and superior command policy.

6. All Department Heads shall ensure wide dissemination of this information and compliance with procedures outlined herein.

F. **RESPONSIBILITY**:

1. Director of Administration.

2. Patient Affairs Officer.

3. Charge Nurse or Assistant.

TAB D

CLINICAL POLICIES/GUIDELINES INDEX

TAB D-1

EMERGENCY MEDICINE POLICIES

A. Airway Management:

1. The standard of ATLS is accepted as policy for DEPMEDS in that the establishment of patient airway is essential for resuscitation of a traumatized patient.

2. There will be use of endotracheal tubes and cricothyroidomies by medical personnel forward of Echelon 3 and 4.

3. Tracheostomies will be performed at Echelon 3 if an endotracheal tube will not suffice; otherwise, tracheostomies will be delayed until the patient reaches Echelon 4.

4. Endotracheal tubes will be used for assisted ventilation if the casualty requires assisted ventilation for relatively brief periods of up to seven days.

5. Patients requiring assisted ventilation to Echelon 5 will have a tracheostomy.

6. Tracheostomy stomas will have large sutures on each side of the tracheal incision in order to facilitate replacement of the tube in case of displacement.

7. Cricothyroidotomies will be changed to tracheostomy within 72 hours if assisted ventilation is still needed.

TAB D-2

EMT POLICIES

A. The EMT and OR Prep and Hold area will be utilized as the pre-operative /resuscitation area. If possible, the patient will have a systolic pressure of > 100 mm Hg and urine output of 30 cc/hour before going to surgery. This requirement may not be possible in some cases. The length of stay in the EMT/Pre-op area will vary with the severity of shock of the individual casualty and the operative case load. For modeling purposes, the average stay in EMT/Pre-op will be 30 minutes for most patient conditions; and in OR Prep and Hold for 90 minutes.

B. 100% of the patients with severe wounds will get tetanus toxoid. These casualties will be determined by the individual patient conditions.

C. All of the crystalloid fluid for initial resuscitation, except that given at Echelon 2, is documented in the EMT area.

D. A universal fitting cervical collar will be applied to all head injuries in 100% of cases. The method used at echelon 2 for stabilizing the neck will be replaced by this above mentioned collar.

TAB D-3

SURGICAL GUIDELINES

A. Whenever abdominal, thoracic, or contaminated surgery is being conducted, simultaneous specialty (Orthopedic, Neurosurgical, Ophthalmological, or Vascular) will not be performed.

B. Operating microscopes are available at COMMZ only. Microscopes are nonsupportable in combat zone. They will be placed in a special augmentation package for Echelon 4. (If damage occurs, microscopes will be exchanged; no repair will be done in the theater.)

C. All casting materiel is documented in the Casting "G" module using one of the "G" tasks. Time has been documented for the cast tech for casting in the OR as well as for checks of splints, casts, pins, and fixateurs on the wards. This time is 4 minutes once a day.

D. In all open fractures of extremities a combination of external fixateurs and plastered casting material will be used. For modeling purposes, 75% of the patients will have external fixateurs and 25% will receive plaster material.

E. Irrigating Fluids:

1. DEPMEDS recognizes the requirement for adequate amount of irrigating fluids. However, emphasis should be placed on using the minimal amount necessary because of the tremendous impact on the logistical system.

2. There will be 2 liters of normal saline per operative case.

F. Dressings will ordinarily not be changed prior to day 4 post initial wound debridement at which time the wound will be examined in the OR for further debridement or delayed primary closure. However, a blood soaked dressing, excessive hemorrhage, and/or sepsis may necessitate wound examination and redressing outside the OR. In the database, all wounds that render the patient non-return to duty within the evacuation policy have a dressing reinforcement in 20% of patients. This category of patients otherwise have dressing reapplied as indicated above in the OR if the stay in theater exceeds 4 days. Further, if the stay exceeded 8 days, another dressing change would be done. For patients returning to duty in the theater, the same policy is in use during initial 4 days and periodic dressing change is accomplished depending on the nature and severity of injury.

G. Blood recovery equipment (or Cell Saver) is available in DEPMEDS at Echelons 3 and 4 and will be used to the maximum extent practical. Anesthesia personnel are responsible to set up and maintain this equipment during operative procedures. Theoretically, this equipment may be used in contaminated and septic cases; however, it is not applied in these cases in the database. The machine requires a liter of sterile saline with 30,000 units of heparin for primary and an additional liter of saline for each unit of blood recovered. Also, it requires a liter for cleaning. The cleaning of the equipment is modeled under the anesthesia area but will be performed by an operating room technician. The set-up consumables are found in CSG 12 and cleaning consumables are in CSG 22.

TAB D-4

PHYSICIAN'S UTILIZATION GUIDELINES

A. The primary physician's treater in the EMT/Pre-op is the Emergency physician. Other specialists provide consults as appropriate.

B. There is a need to develop a secondary treater for all possible tasks.

C. Physician's specialty follow-up on wards will be two 10-minute visits for ICU and one 10-minute visit every 3 days on the ICW. There will be no specialty follow-up on MCWs. The primary physician on the MCW is the General Medical Officer.

D. Since there will be a great demand for surgeon's time, some surgical patients, for example, closed head injuries are followed by a neurologist or internist. Also, some surgical patients will be cared for in the immediate post-op period (first day or two) by a surgeon and then followed by a non-surgeon.

E. Consultative time for physicians will be 30 minutes.

F. The emergency physician in EMT will perform a complete work-up of all patients going to OR, however, patients not requiring surgery will have only those tasks performed in EMT required to validate the patient status. The patient will have a complete work-up performed by the Ward Medical Officer.

G. All specialists consulting in EMT will perform three tasks totaling 16 minutes for each episode.

TAB E

STANDARDS AND JOB DESCRIPTIONS INDEX

TAB E-1

CASUALTY RECEIVING EVALUATION STANDARDS

A. Triage Officer assigns appropriate Triage Classification Group to patient IAW the Military Triage Classification System.

B. All patients are properly logged in A&D log and the pre-admission packet register number matches the number in the log.

C. The ratio of treatment team to immediate category patients never exceeds 1:2.

D. ATLS protocol is followed in providing emergency care, (i.e., primary assessment, resuscitative measures, secondary assessment, and initial definitive care).

E. Treatment team members follow instructions given by the Team Leader only.

F. Personnel are able to independently perform all procedures listed in job descriptions.

G. Fire, safety, security, and waste disposal policies set by the hospital are observed.

H. Casualty Receiving treatment stations are set up to immediately receive patients.

I. Treatment stations one and two are used to treat multiple trauma casualties requiring complex life saving measures.

TAB E-2

POTENTIAL HAZARDS IN CASUALTY RECEIVING AREAS

A. X-ray exposure from portable x-rays.

If possible, leave section when X-ray is taken. If person must remain with patient, wear lead apron. Aprons available from Radiology Dept.

B. Needle sticks.

1. Dispose of all sharp items in proper containers.

2. Report needle stick to Charge Nurse immediately and get medical attention IAW Environmental Health Policy.

C. Muscle strain.

Observe good body mechanics when transporting litters, lifting or positioning patients.

D. Cut fingers from opening ampule.

When breaking a glass ampule, use a file and cover the tips with a piece of gauze to protect your fingers.

E. Shock from defibrillator.

Stand away from litter upon "ALL CLEAR" call.

F. Beware of loaded weapons on patients arriving in triage.

Allow security to remove weapon before treating.

G. Be cautious in examining wounds with explosives inside.

TAB E-3

EMERGENCY CARDIO RESUSCITATION KIT

A. **PURPOSE:** To provide appropriate supplies/equipment needed during emergency situations.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED**:

1. Emergency Cardio Resuscitation Kit (Sparks Kit).

2. Emergency Kit Inventory List.

3. Departmental Log.

D. **CRITERIA**:

1. Emergency Cardio Resuscitation Kit is readily accessible.

2. Kit is completely stocked and inventoried when seal is intact.

3. Oxygen cylinders, wrenches, and seals on Emergency Cardio Resuscitation Kit will be checked every watch.

E. **STEPS**:

1. Emergency Cardio Resuscitation Kit will be located in the Casualty Receiving Area at all times. It will be used only for cardio resuscitative emergencies.

2. Senior Corpsman on each watch will check to ensure seals have not been broken, and oxygen pressure in cylinders is sufficient, that is psi is not less than 500.

3. Inventory Emergency Cardio Resuscitation Kit every three months or when seals have been broken.

4. Check daily the Emergency Kit Inventory List posted on the outside of kit for drug expiration dates.

5. Make appropriate entries in the Departmental Log (TAB G-1).

6. Senior Corpsman will be responsible for re-supplying cart during normal working hours. The Watch LPO assumes this responsibility at other times.

F. **RESPONSIBILITY**:

Senior Corpsman or his representative.

TAB E-4

ORIENTATION PROGRAM FOR CASUALTY RECEIVING

A. **TERMINAL OBJECTIVE:** Each person will demonstrate knowledge and skills necessary to work independently in the Casualty Receiving Area. The knowledge and skill level required will be dependent upon the billet assigned in Casualty Receiving Area.

B. **ENABLING OBJECTIVES**:

1. Will have completed a two week training course at the Fleet Hospital Training Activity (FHTA), Camp Pendleton, Ca. As part of the course will have experience in Casualty Receiving Area.

2. Demonstrate a working knowledge of the physical layout of Casualty Receiving Area and how to set up a treatment station.

3. Officers permanently assigned to area will have completed an ATLS course, preferably C-4 or C-4A.

4. Members of treatment teams will practice their roles IAW the Treatment Team Protocol in the Casualty Receiving SOP.

5. Administer treatment to Immediate Category patients within the benchmark times 80 percent of the time during a simulated casualty exercise.

6. Perform procedures IAW the Casualty Receiving Area SOP.

TAB E-5

CASUALTY RECEIVING CLEANING SCHEDULE

A. **PURPOSE**: To keep the Environment as clean as possible.

B. **EQUIPMENT, SUPPLIES, AND FORMS NEEDED**:

1. 4 scrub basins/buckets.

2. Gloves.

3. Wet vacuum.

4. Scrub brushes.

5. Sponge mop.

6. Wipes.

7. Detergent, GP.

8. Germicidal solution.

9. Laundry bag.

10. Plastic, water soluble laundry bag.

11. Plastic trash bag.

12. Covered container for medical/dental wastes.

C. **CRITERIA**:

1. Soiled linens, medical wastes and instrument trays will be removed after each case.

2. Decks will be wet-vacuumed daily.

3. Counter tops will be cleaned daily.

4. Temper tent equipment, shelving, litters will be cleaned weekly.

5. Refrigerator and ice machine will be cleaned weekly.

D. **STEPS**:

1. Treatment station cleaning schedule.

(a) After each patient is transferred, segregate and dispose of all used items.

(1) Roll up linens and double bag in a cloth laundry bag.

(2) Place trash in double plastic bags.

(3) Empty drainage bottles into a covered medical waste container.

(4) Rinse all used instruments in cold water if possible.

(5) Disengage all needles and scalpel blades from handles/holders and place in a separate tray/basin.

(b) Have runner take all instrument trays to CSR for reprocessing.

(c) Quickly wash down any surfaces including deck that may have become contaminated or soiled with blood, etc.

(d) Restock supplies.

(e) If oxygen was used, check psi level. If level below 100 psi, replace the cylinder.

2. Daily cleaning schedule.

(a) Wash decks with wet-vacuum on night watch.

(b) Wipe down counter tops on night watch.

(c) Restock core area supplies on night watch.

3. Weekly cleaning schedule.

(a) Wipe down litter racks, storage cabinets, shelving and desk tops.

(b) Clean the refrigerator and ice machine.

E. **RESPONSIBILITY**:

Senior Corpsman or LPO will assign cleaning details to watch.

TAB E-6.1

HEAD, CASUALTY RECEIVING JOB DESCRIPTION

A. **RESPONSIBILITY**: The Head, Casualty Receiving, a Medical Officer, is responsible for Casualty Receiving Area. He reports to the Head, Surgical Department.

B. **THE HEAD, CASUALTY RECEIVING WILL**:

1. Set policies and procedures for the Casualty Receiving Area.

2. Orient medical officers to Casualty Receiving Area.

3. Head a permanent treatment team.

4. Oversee the primary assessment, resuscitative care, secondary assessment, and initial definitive care given by treatment teams.

5. Determine surgical priorities of admissions to Casualty Receiving.

6. Communicate with the Command Duty Officer, Registrar, and OR Prep and Hold Medical Officer about surgical needs of patients.

7. Approve all communications within and outside of the department.

8. Approve all personnel performance evaluations.

9. Oversee an orientation and training program.

10. Prepare and submit all area reports in final form.

C. **QUALIFICATIONS**:

1. Designator 2100/2105 Physician.

2. Board Certified Emergency Medicine Physician with Subspecialty Code 0051 recommended.

3. Advance Trauma Life Support (ATLS) certified.

4. Advance Cardiac Life Support (ACLS) certified.

TAB E-6.2

TRIAGE OFFICER JOB DESCRIPTION

A. **RESPONSIBILITY**: The Triage Officer is responsible for sorting casualties according to the degree of injuries. He reports to the Head, Casualty Receiving Area.

B. **THE TRIAGE OFFICER WILL**:

1. Examine all casualties to evaluate the seriousness of their injuries.

2. Assign a treatment priority IAW the Military Triage Classification System (Ref FMFM 4-5). The priority groups are expectant, immediate, delayed, and minimal.

3. Train HM recorder to record findings on U.S. Field Medical Tag or alternate triage tag.

4. Designate areas outside/inside casualty receiving for sorting/holding each priority group until ready for treatment.

5. Notify Head, Casualty Receiving area of casualties received so assignments can be made to treatment teams.

6. Develop and implement triage protocols for the hospital.

7. Orient other Medical and Dental Officers to Triage Protocols to serve as Triage Officers on the relief watch.

8. Perform other duties in Casualty Receiving Area as assigned.

B. **QUALIFICATIONS**:

1. Medical or Dental Officer.

2. Familiarity with Military Triage classification Group and types of injuries appropriate for each group.

3. Advanced Trauma Life Support (ATLS) certified.

4. Advanced Cardiac Life Support (ACLS) certified.

5. Intermediate LMET graduate.

6. Fleet Hospital Operations Course graduate.

TAB E-6.3

MEDICAL OFFICER ON TREATMENT TEAM

A. **RESPONSIBILITY**: The Medical Officer on the Treatment Team reports to the Head, Receiving Area.

B. **THE MEDICAL OFFICER WILL**:

1. Serve as Team Leader on treatment team.

2. Perform primary assessment on patient.

3. Direct resuscitative measures to be implemented by other team members (Nurse, Corpsman A., Corpsman B, Anesthesia staff, and Physician Assistant).

4. Perform treatment procedures as necessary IAW ATLS protocols (e.g., IV cutdown, needle thoracentesis, chest tube insertion, and/or peritoneal lavage).

5. Orient and train treatment team members to perform resuscitative measures.

6. Review and sign doctors orders and notes on SF 508 and FHCZ 0104.

7. Initiate a history and physical on patient on SF 539 only if time permits.

C. **QUALIFICATIONS**:

1. Designator 2100/2105 physician.

2. Emergency Medicine, Family Practitioner, or General Surgeon physicians are recommended.

3. Advanced Trauma Life Support (ATLS) certified.

4. Advanced Cardiac Life Support (ACLS) certified.

5. Intermediate LMET graduate.

TAB E-6.4

CHARGE NURSE JOB DESCRIPTION

A. **RESPONSIBILITY**: The Charge Nurse is responsible for the management of nursing and nursing care and reports to Head, Casualty Receiving Area.

B. **THE CHARGE NURSE WILL**:

1. Assign duties to professional and ancillary staff members.

2. Supervise and evaluate individual work performance in terms of patient care, staff relations, and efficiency of service. Prepare formal, written evaluations when required.

3. Coordinate patient care with other departments and services within the hospital. Promote good interpersonal and interdepartmental relationships.

4. Promote staff development through inservice classes and cross training. Counsel personnel with deficits, identifying capabilities and training needs.

5. Ensure that established policies, procedures, and routines are current and available in the department standard operating procedure manual.

6. Participate in patient care performing the following tasks:

(a) Intubation of patient with obstructed airway.

(b) Medications including bolus IV drugs.

(c) Parenteral drug/blood product administration (Level II).

(d) Cardiac monitoring.

(e) Insertion of chest tube.

(f) Oxygen administration.

(g) Other emergency treatment measures.

7. Report all pertinent information to the Head, Casualty Receiving.

8. Ensure that primary assessment, resuscitative therapy, secondary assessment, and initiation of definitive care steps are done on each trauma patient.

9. Maintain a clean, safe, and orderly environment. Ensure that treatment stations are cleaned and set up after use to ensure a constant state of readiness.

10. Prepare watch schedules for personnel as directed, using staff policy for the hospital.

11. Comply with established inventory procedures to account for narcotics, controlled drugs, and other dangerous substances.

12. Assess, plan, implement, and evaluate patient care in compliance with standards for emergency room nursing practice.

C. **QUALIFICATIONS**:

1. Designator 2900, NOBC 0940, Emergency Room Nurse Subspecialty Code 1945.

2. Advanced Cardiac Life Support (ACLS) certification.

3. Completion of Advanced Trauma Life Support (ATLS) course (C-4) is required.

4. Level IV certification for administering parenteral fluids and blood products IAW NAVMEDCOMINST 6550.3.

5. Intermediate LMET graduate.

6. Fleet Hospital Operations Course graduate.

TAB E-6.5

STAFF NURSE JOB DESCRIPTION

A. **RESPONSIBILITY**: The Staff Nurse performs nursing duties as a member of a treatment team assigned to the Casualty Receiving Area. The Staff Nurse is supervised by the Charge Nurse of the area. The Medical Officer on the treatment team directs emergency treatment for a specific patient.

B. **THE STAFF NURSE WILL**:

1. Coordinate the nursing process; assess, plan, implement and evaluate nursing care in compliance with emergency room nursing standards of practice.

2. Provide nursing care to patients as a member of a treatment team. Specifically the staff nurse will:

(a) Obtain vital signs.

(b) Obtain preliminary history if possible.

(c) Intubate if airway is obstructed if received special training.

(d) Insert chest tube if received special training.

(e) Initiate peripheral IVs in extremities.

(f) Catheterize/assist with catheterization of patient.

(g) Insert a nasogastric tube if needed.

(h) Monitor physiological status; Glasgow coma test, pupillary checks, circulation checks, urinary output.

(i) Administer medications and blood products IAW, NAVMEDCOMINST, 6550.3.

(j) Reassure anxious patient.

3. Assist and direct new nurses and corpsmen in performance of emergency room nursing care.

(a) Conduct classes on new procedures/protocols.

(b) Supervise orientation of corpsmen to special emergency care procedures.

(c) Orient members to treatment team protocol.

4. Initiate cardio-pulmonary resuscitation and other life support measures as needed.

5. Coordinate lab, x-ray and other diagnostic tests being performed on patients.

6. Give report to nurse in another hospital area to which patient is being transferred.

7. Maintain anecdotal notes on staff.

8. Locate and operate all emergency equipment in Casualty Receiving Area.

9. Assist with cleaning and set up of treatment stations.

QUALIFICATIONS:

1. Designator 2900, NOCB 0944.

2. Previous experience in Emergency Room Nursing or Critical Care Nursing is highly recommended.

3. Advanced Cardiac Life Support (ACLS) certification.

4. Completion of Advanced Trauma Life Support (ATLS) course (C-4) is suggested.

5. Level III certification for administering parenteral fluids and blood products IAW NAVMEDCOMINST 6550.3.

6. Recommend certification at Level IV to administer bolus IV drugs.

7. Completion of medication orientation course.

8. Intermediate LMET graduation is recommended.

TAB E-6.6

SENIOR CORPSMAN JOB DESCRIPTION

A. **RESPONSIBILITY**: The Senior Corpsman is directly responsible to the Charge Nurse Casualty Receiving for the overall performance, military conduct, and appearance of corpsmen assigned to the area.

B. **THE SENIOR CORPSMAN WILL**:

1. Assist the charge nurse with coordinating daily staffing, teaching, counseling, and general supervision of Corps staff.

2. Orient new Corpsmen to Casualty Receiving Area.

3. Ensure the chain of command is followed, that all staff know chain of command and proper routing for special requests.

4. Conduct monthly staff meetings to convey information, discuss problems, and contribute to the problem solving process.

5. Monitor and maintain adequate administrative and patient care supplies. Order supplies from:

(a) CSR - sterile instrument packages.

(b) Medical Supply - medical supplies.

(c) Supply - forms and administrative items.

(d) Laundry - linens.

6. Monitor the safety and function of all equipment. Submit work request to Medical Repair and track progress on work requests.

7. Ensure staff are familiar with the procedures for fire, cardiac arrest codes, securing weapons, and general safety procedures.

8. Ensure proper disposition of contaminated instruments, equipment, and materials.

9. Make rounds to treatment team stations and triage area to ensure staff meet patient needs and work is being completed efficiently.

10. Assist corpsmen with patient care and procedures as needed. Serve as resource to corpsmen on treatment teams.

11. Responsible for Casualty Receiving Area appearance. Make cleaning assignments and ensure area is clean before watch is secured. Prepare area for inspection and accompany the Inspecting Officer.

12. Counsel Corpsmen as needed about work performance including career development.

13. Maintain good interpersonal relations with other hospital departments and staff members.

14. Report to and obtain assistance from Charge Nurse as needed.

15. Ensure that all daily logs and records are completed correctly.

16. Check emergency Cardio Resuscitation Kits and oxygen cylinders every watch.

17. Assign personnel to prepare and store sandbags outside Casualty Receiving Area.

18. Prepare and submit monthly watch bills.

19. Pass word to on coming watch.

20. Perform other duties as assigned by Charge Nurse.

C. **QUALIFICATIONS**:

1. Petty Officer (C-5 or above preferred).

2. NEC 8425, Emergency Medical Technician training recommended.

3. Six months experience in emergency care, trauma or critical care required.

4. Basic Cardiac Life Support (BCLS) certification.

5. Level II certification IAW NAVMEDCOMINST 6550.3 to initiate and monitor parenteral IV fluids.

6. Medication certification.

7. Suture certification.

8. Possess knowledge of hospital policies and procedures as well as military regulations, procedures, and protocol.

9. LPO, LMET graduate.

10. Fleet Hospital Operations and Maintenance Course graduate.

TAB E-6.7

STAFF CORPSMAN JOB DESCRIPTION

A. **RESPONSIBILITY**: The Staff Corpsman, responsible to the Senior Corpsman in Receiving Area, is assigned to a treatment team or to perform general duty assignments.

B. **THE STAFF CORPSMAN WILL**:

1. Assist the treatment team in giving advanced nursing care in compliance with the standards for emergency nursing practice.

(a) Serve as recorder for treatment team, (if assigned).

(b) Catheterize patients under direction of nurse and monitor urinary output.

(c) Connect ECG leads and monitor cardiac output.

(d) Apply traction splints.

(e) Administer medications by all routes except IV push.

(f) Reassure and support patient.

(g) Administer oxygen therapy.

2. Perform CPR if code is called and quickly locate and operate emergency equipment as required.

3. Assist in replenishment of supplies.

4. Clean and set up treatment stations to ensure continual readiness.

5. Assist in orienting new staff corpsmen to area.

6. Maintain a professional relationship at all times with staff and patients, and recognize and follow the chain of command.

7. Transport patients to other hospital areas.

8. Run lab specimens to laboratory module.

9. When work is completed, report to senior corpsman for further assignment.

10. Pass word to oncoming watch.

B. **QUALIFICATIONS**:

1. Completion of "A" school (Hospital Corps School).

2. Previous experience in emergency room or critical care area is highly recommended.

3. Basic Cardiac Life Support (BCLS) certification.

4. Emergency Medical Technician - ambulance level certification.

5. Level II certification IAW NAVMEDCOMINST 6550.3 to initiate and monitor parenteral IV fluids.

6. Completion of medication orientation course.

7. Fleet Hospital Operations Course graduate.

TAB G-6.8

ADMISSIONS CLERK JOB DESCRIPTION

A. **RESPONSIBILITY**: The Admissions Clerk is responsible to the Registrar in the Administration Department for initiating the admitting process.

B. **THE ADMISSIONS CLERK WILL**:

1. Assemble pre-numbered admission packets that correspond to the A and D log numbers.

2. Prepare an ID bracelet for each admission and secure to patient's wrist.

3. Record in A and D log, patients name and other required information.

4. Notify Security about weapons and any emergency prisoner of war admissions.

5. Secure baggage and other valuables belonging to patient IAW Chapter 07.

6. Notify Registrar of admissions.

7. Maintain logs and files in Casualty Receiving Area.

8. Perform other duties as assigned.

9. Pass word to oncoming watch.

C. **QUALIFICATIONS**:

1. Completion of "A" School (Hospital Corpsman School).

2. Previous experience in patient administration is desirable.

TAB F

REFERENCES

Number	Reference Number	Title
F-1	FMFM 4-5	Medical and Dental Support, U.S. Marine Corps
F-2		NATO Emergency War Surgery Handbook
F-3		Advanced Trauma Life Textbook (ATLS) by the American College of Surgeons
F-4		Advanced Cardiac Life Support (ACLS) Interim Guidelines by the American Heart Association
F-5		Basic Cardiac Life Support (BCLS) Interim Guidelines by the American Heart Association
F-6	NAVMED P-5066-A	Navy Nursing Procedures Manual
F-7	NAVMED P-5095	Poisons, Overdose, Antidotes and Emergency First Aid
F-8		Military Aspects of Medical Care; Student Handbook, Uniformed Services University of the Health Sciences
F-9		Emergency Medical Care, Student Handbook; Uniformed Services University of the Health Sciences

TAB G

FORMS INDEX

TAB G-1

DAILY EMERGENCY EQUIPMENT LOG ENTRY

SAMPLE

Time	Subject
0900	Emergency Equipment Daily Check:

SPARKS kit sealed. No drugs expired IAW Drug Inventory List. Oxygen cylinder reading 90 psi. Cylinder replaced. New cylinder reading 3,000 psi.

_____
Signature (end of watch)

TAB G-2

TRIAGE LOG ENTRY

DATE:

Triage #	NAME	DIAGNOSIS	CATEGORY	DISPOSITION
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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16.				
17.				
18.				
19.				
20.				
21.				